An Examination of the Retirement Benefits for Educational Leaders in Indiana

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Executive Summary

More than ever, schools, communities and states are concerned over finding ways to attract and retain high-quality educators. The importance of educator retention is further compounded in an environment where there may be a shortage of qualified educators. There is substantial debate within education circles as to whether there is a real or perceived shortage of administrators. The manner in which school administrators are compensated for their work is potentially very important for state policy makers to understand when designing and refining their pension plans. One aspect of educator compensation that is also very important, but has not received the same amount of attention in the literature, is the impact of benefits – particularly retirement/pension benefits – on the employment decisions of educators. Pension benefits are a form of deferred compensation for employees, and therefore they have the potential to affect the labor market decisions of educators including the state where educators choose to work, when they will retire, and whether they will move to another state at some point in their career.

This study is broken into four main sections. The first part reviews the empirical and theoretical work that has been conducted around the effects of retirement benefits on the labor market decisions of school administrators. This section begins with a review of the literature on how selected factors, including retirement benefits, affect the labor market choices of educators. A conceptual model is then presented to illustrate how benefits might influence choices of administrators with regard to which state to work in and whether it would be beneficial at some point in their career to move to another state with more generous pension plans.

The second portion of the study compares and explains in detail the approaches used by Indiana and five selected states – Illinois, Kentucky, Michigan, Ohio, and Florida – to determine the retirement benefits paid to school administrators through state-run pension plans. These

states were selected for comparison due either to their proximity to Indiana or, in the case of Florida, to its popularity as a retirement destination. The review was accomplished by gathering detailed information on how the retirement benefit programs are structured in each state.

The third section of the report contains a series of simulations. The first set of simulations is used to illustrate how selected features of pension plans affect the benefits received by school administrators. The second set of simulations is designed to compare the net lifetime retirement benefits that an administrator would receive in each of the six states for 10-year and 20-year periods.

Finally, the fourth part of the study focuses on the perceptions that school administrators in Indiana have regarding the retirement benefits in Indiana and in neighboring states, including whether these benefits influenced their choice as to where to work and where to retire. To answer these questions, superintendents and principals in Indiana were surveyed in the spring of 2007 to determine how a range of factors, including benefits, influenced their current and future career plans. The findings from the surveys are summarized and then compared to the results of the multi-state pension plan review. The report then concludes with a series of recommendations to be considered for improving the state's pension plan for school administrators.

Some of the key findings from the six-state comparisons of school administrator pension plans include:

- ✓ The formula multiplier and the cap on pension benefits can have large effects on the annual pension benefits received by school administrators.
- ✓ School administrators will usually lose pension benefits when they move from one state to another unless they receive additional compensation in the form of higher salaries, additional retirement benefits from annuities, or fringe benefits.

- ✓ Indiana's pension plan for school administrators does not compare favorably to other states in terms of the formula multiplier used to calculate annual pension benefits.
- ✓ Indiana is at a disadvantage relative to other states in its ability to attract school administrators from other states due to the large number of years required for vesting of retirement benefits and the low formula multiplier.
- ✓ Three advantages of Indiana's pension plan relative to other states are: (1) administrators do not have mandatory contributions to participate in the pension plan, (2) there is no cap on the annual pension benefits, and (3) Indiana offers an additional annuity to which the administrator contributions are made by school corporations.
- ✓ Overall, Indiana's pension plan is slightly below average in comparison to the other five states considered here. In addition, as the retirement length increases, Indiana's pension plan becomes less favorable because the administrator's annuity benefits would accumulate at a slower rate than the annual pension benefits.

The surveys of superintendents and principals revealed the following key findings:

- ✓ School administrators reported that Indiana compared most favorably with other states in terms of cost-of-living and opportunities for employment.
- ✓ School administrators felt that Indiana compared less favorably in terms of retirement benefits and years required for vesting. Administrators also felt that the personal contributions to Indiana's pension plan were higher than in other states, even though this was shown to be false.
- ✓ Non-financial factors such as the geographic location of a state and the proximity to family were more important than financial aspects of administrative positions (salaries and benefits) when choosing a state in which to work. Nonetheless,

financial considerations were still important to school administrators in their decision-making process.

- ✓ Non-salary benefits were important to school administrators when choosing a school corporation in which to work. Other factors such as relations with the school board and salary, however, were even more important. At the other extreme, the quality of students and socioeconomic status of the community were less important to administrators when selecting a school corporation.
- ✓ The vast majority (78%) of superintendents and principals (85%) stated that they intend to finish their careers in education in Indiana. The geographic location, retirement benefits, and the years needed for vesting in pension plans were all important factors in their decision to consider moving to another state. The statistical model, however, revealed that salary, employment opportunities, and the cost-of-living were the most important factors in determining whether administrators indicated that they planned on staying in Indiana for the remainder of their career.
- ✓ The cost and time barriers to becoming a superintendent were listed as important factors for Indiana principals in deciding whether or not to consider becoming a superintendent in the future. The statistical model revealed that after taking other factors into account, those who stated that financial factors were important in their decision were less likely than others to consider becoming a superintendent. This finding is confusing given that salaries and benefits for superintendents are almost always higher than they are for principals.

To help improve the competitiveness of Indiana's pension plan for school administrators, a number of recommendations can be made based on the findings presented in this study:

1. *Make changes to Indiana's pension plan that would improve the lifetime retirement benefits for school administrators*. Through such improvements, the state would be better positioned to attract school administrators at the beginning of their careers, as well as to entice administrators to move to Indiana during their careers. Improvements that might be considered by the state include the following:
    - *Increase the formula multiplier to 1.5%*. This could result in an increase of 15% to 25% in the net lifetime retirement benefits for school administrators and allow Indiana's pension plan to be viewed as more comparable to other states that allow administrators to retain their Social Security benefits.
    - *Enact a three percent automatic cost-of-living increase for annual pension benefits*. This would alleviate concerns about Indiana's benefits losing ground over time due to inflation, and would not dramatically increase the cost of the pension plan to the state.
2. *Revise Indiana's pension plan in ways that will make it more attractive for school administrators from other states to relocate to Indiana*. Because school administrators stand to lose pension benefits when they move, it is imperative that the state find ways of reducing the financial harm that they would experience. These changes might include the following:
    - *Decrease the years required for vesting in the state pension plan*. Currently, Indiana's 10-year vesting requirement serves as a disincentive for administrators over the age of 55 to move to Indiana. By lowering the vesting requirement to five years or less, Indiana would be better positioned to compete with other states for attracting experienced school administrators.

- *Increase the number of years of service credit that school administrators from other states can purchase when they move to Indiana.* By relaxing these rules, the state can enable school administrators from other states to increase their pension benefits and make up part of the deficiency that occurs when they move between states.

3. *Explore whether a small personal contribution level should be added to help fund the state's pension plan*. It appears that school administrators are more concerned with the level of benefits received than they are with the level of contributions necessary to participate in the plan, so "high benefit, high contribution" plans may be viewed by school administrators as being better than "low benefit, low contribution" plans even when the net benefits are the same. School administrators may also be able to negotiate with school corporations to pay their personal contributions to the pension plan in the same way that corporations pay the contributions to the annuity plan.
4. *Better inform school administrators about how retirement benefits are calculated, and highlight the positive aspects of Indiana's pension plan*. It may not be well known among school administrators, for example, that states such as Kentucky and Ohio with notably higher formula multipliers than Indiana do not allow pension plan participants to retain their Social Security benefits. Administrators may not be aware of the fact that in many states, they would have to make contributions of about 10% of their salary each year in order to take part in the state pension plan, whereas Indiana requires no personal contributions from school administrators. In addition, school administrators may not know that some states such as Illinois impose caps on their annual pension benefits that can greatly reduce the lifetime financial benefits

that administrators would receive. Highlighting the positive aspects of Indiana's pension plan and illustrating how it is difficult to improve one's retirement benefits by moving to other states may help Indiana retain more experienced school administrators.

5. *Conduct a follow-up study of Indiana school administrator knowledge of pension plans*. This report has shown that the pension plans for school administrators are very complex. Accordingly, it is likely school administrators do not fully understand the range of pension elements that affect retirement calculations, and thus cannot make accurate comparisons of the plans offered in different states. A follow-up study should be conducted with surveys and focus groups to discover the extent to which school administrators in Indiana understand the different components of the state's pension plan. This information would be useful to the state in making decisions as to how to modify the pension plan in the future and better inform school administrators about the state's plan.

An Examination of the Retirement Benefits for Educational Leaders in Indiana

Introduction

More than ever, school communities and states are concerned over finding ways to attract and retain high-quality educators. Federal and state governments have imposed tougher accountability requirements on public schools in recent years through the federal "No Child Left Behind" Act and P.L. 221 in Indiana. Because education is a highly labor-intensive industry, having the best and brightest teachers is crucial for schools to meet the performance standards set by states. Furthermore, research suggests that the ability of schools to find and keep administrators who are successful in leading schools towards the achievement of performance targets is also very important (Chubb & Moe, 1990; Leithwood, Seashore Louis, Anderson, & Wahlstrom, 2004; Marvel, Lyter, Peltola, Strizek, & Morton, 2006). Teacher and administrator turnover also imposes substantial costs on schools due to the need to hire and train new individuals. Norton (2002) reported that the cost of replacing a mid-level manager was approximately $25,000, and thus it would not be surprising to see the cost of replacing a principal or superintendent reaching beyond $40,000 for school districts.

The importance of educator retention is further compounded in an environment where there may be a shortage of qualified educators. Substantial debate exists within education circles as to whether there is a real or perceived shortage of administrators. Some sources have cited statistics to argue that many states are on the verge of substantial deficiencies in the numbers of qualified people who can assume leadership roles within schools (Archer, 2003; Tirozzi & Ferrandino, 2000). Others such as Roza, Celio, Harvey, and Wishon (2003) counter that in most areas the supply of individuals who are qualified for school administrative positions exceed the supply of positions (also see Lashaway, Hathaway, Bryant, Maloney, & Hett, 2005). For

instance, a recent study in Indiana found that there was a substantial amount of overproduction of building-level administrators (Black, Bathon, & Poindexter, 2007). Regardless of which view is accepted, it is clear that the gradual shifting of the age distribution of the teaching and administrator work forces will eventually lead to an increase in the number of educators who are retiring. This demographic trend would exacerbate the importance of finding ways to retain effective school leaders.

Data from a variety of sources illustrate that the low retention rates for both teachers and school administrators are important problems for K-12 education. The National School Board Association reports on its web site, for example, that "superintendents in urban districts serve an average of five years." (Council of Urban Boards of Education, 2003). Roduta (2006) reported that the average tenure of superintendents in Ohio is only four years. A 2003 survey of superintendents in Colorado found that making pension benefits more portable would be an effective strategy for improving retention in the field (Colorado Association of School Executives, 2003).

As discussed in the literature review, studies from a variety of labor markets have been conducted to identify factors that influence the mobility and retention of employees. Policy makers need to pay particularly close attention to the role that employee compensation plays in retention because this is something that can be influenced by their decisions. Not surprisingly, the level of compensation is usually found to be an important determinant of where people choose to work and their likelihood of looking for other employment.

One aspect of educator compensation that is also very important, but has not received the same amount of attention in the literature, is the impact of benefits – particularly retirement/pension benefits – on the employment decisions of educators. Pension benefits are a

form of deferred compensation for employees, and therefore have the potential to affect the labor market decisions of educators including the state where educators choose to work, when they will retire, and whether they will move to another state at some point in their career. Because most retirement programs for educators are state-run programs, and the pension plans can vary greatly across states, pension benefits are likely to affect the state where an educator works. Pension benefits may also influence the choice of school corporations if higher salaries and other perks lead to greater retirement benefits.[1] Despite the potential importance of retirement benefits on employment and retirement decisions of educational administrators, very little is known about how retirement benefits compare across states and whether they influence the labor market decisions of administrators.

This study is broken into four main sections. The first part reviews the empirical and theoretical work that has been conducted around the effects of retirement benefits on the labor market decisions of school administrators. This section begins with a review of the literature on how selected factors, including retirement benefits, affect the labor market choices of educators. A conceptual model is then presented to illustrate how benefits might influence choices of administrators with regard to states in which to work, and whether it would be beneficial at some point in their career to move to another state with more generous pension plans.

The second part of the study compares and explains in detail the approaches used by Indiana and five selected states – Illinois, Kentucky, Michigan, Ohio, and Florida – to determine the retirement benefits paid to school administrators through state-run pension plans. These states were selected for comparison due to either their proximity to Indiana or, in the case of

[1] As noted in a recent story in the *Indianapolis Star*, however, school corporations often give administrators additional retirement benefits in the form of annuities that can be used to draw superintendents and principals away

Florida, its popularity as a retirement destination. The review was accomplished by gathering detailed information on how the retirement benefit programs are structured in each state.

The third section of the report contains a series of simulations. The first set of simulations is used to illustrate how selected features of pension plans affect the benefits received by school administrators. The second set of simulations is designed to compare the net lifetime retirement benefits that an administrator would receive in each of the six states for a 10-year and 20-year horizon.

Finally, the fourth part of the study focuses on the perceptions that school administrators in Indiana have regarding the retirement benefits in Indiana and in neighboring states, including whether these benefits influenced their choice as to where to work and where to retire. To answer these questions, superintendents and principals in the State of Indiana were surveyed in the spring of 2007 to determine how a range of factors, including benefits, influenced their current and future career plans. The findings from the surveys are summarized and then compared to the results of the multi-state pension plan review. The report then concludes with a series of recommendations to be considered for improving the state's pension plan for school administrators.

Part I: Review of Research on Pension Benefits for School Administrators

School administrators in Indiana receive compensation in several different forms. The largest and most recognizable form is in the salaries paid to school administrators. Unlike teachers, administrator salaries are not usually set by the negotiations between the school board and the union and are not prescribed according to a rigid salary schedule based only on years of service and educational attainment. A recent survey of school districts in Texas showed that the average salary for superintendents in the state for 2006-07 was $109,856, and ranged from a low

of $76,356 to a high of $263,240 (Texas Association of School Boards, 2007). Similarly, Carr (2003) reported that nationally the average contract salary for superintendents in 2000-01 was $118,496, with principals earning on average between $72,587 at the elementary level and $83,367 at the high school level. Stover (2004) cited examples where the high demand for superintendents in urban districts has led to substantial increases in compensation in these locales well beyond the figures shown by Carr (2003).

In addition to salary, school administrators receive compensation in the form of benefits. This is an important part of their overall compensation, with non-salary benefits adding up to about one-third of the salary received by an administrator. The non-salary benefits can be grouped in two general categories: in-kind benefits and deferred compensation. In-kind benefits are compensation that is given for a specific purpose, such as medical care, dental care, transportation, tuition benefits for family members, and so on. The levels and types of in-kind benefits can vary greatly across school corporations. School administrators may often prefer in-kind subsidies to cash subsidies because the contributions are often tax free and the services can be purchased at a lower price due to the greater bargaining power of the school corporation. However, as revealed in a recent article in the *Indianapolis Star* (Gammill, 2007), some superintendents prefer to receive the cash equivalent of various in-kind benefits because in doing so they will raise their salaries and in turn receive larger pensions when they retire.

The second category of non-salary benefits that school administrators receive is their deferred compensation, or retirement benefits through pension plans. A pension plan can be administered on the basis of either defined contributions or defined benefits. States typically rely on defined benefit plans for their public employees. Under a defined contribution plan, the school administrator and/or the school corporation makes specific contributions each year to the

administrator's pension. The contributions are then invested in a designated set of assets such as mutual funds or annuities, and the final value of the pension would depend not only on the size of the contributions, but also the return on the investments in the plan. In a defined benefit plan, the annual pension for school administrators is fixed based on the administrator's years of service credit in the state and final average salary. Whereas the risk in the defined contribution plan is on the school administrator to save enough money for retirement, the risk in the defined benefit plan is on the state to guarantee that it can make the promised payments to administrators for every year in which they would draw benefits.

There is relatively little information available that summarizes the different state pension plans that are used for school administrators, and studies that do exist are primarily descriptive in nature. The most comprehensive report was produced by William Ford (2005) for the Wisconsin Legislative Council.[2] Ford (2005) collected information in 2004 on 85 different state retirement plans for public employees, through which school administrators receive their pensions. As noted by Ford, in the vast majority of states (including Indiana), all K-12 educators - teachers, principals, and superintendents – are covered under the same pension plan. A similar review of state pension plans was produced by the Indiana Legislative Services Agency (2006). This report was notable in that in addition to summarizing selected aspects of state pension plans, the report also compared the net pension benefits for employees under several scenarios. A similar approach is used later in this report to examine the net pension benefits for school administrators in Indiana.

Despite their possible importance in attracting and retaining educators, the retirement benefits given to school administrators and other educators has received very little attention from both policy makers and education researchers. The majority of the research that has been

[2] The report can be accessed online at http://www.legis.state.wi.us/lc/publications/crs/2004_retirement.pdf.

conducted to date has centered on the effects of salary on the labor market choices of teachers. Likewise, the theoretical research has focused on general explanations for how workers make decisions about where to work, and has not delved into the specific effects that retirement benefits might have on these and other labor market decisions. This section begins with a review of the empirical studies that have been performed on the labor market choices of school administrators and educators. The second section expands on a simple theoretical model of labor market decision making to show how the design of a state's pension plan may impact where a school administrator chooses to work.

Empirical Studies of Labor Market Choices of Educators

There have been a number of studies that have focused on the effects of selected factors on the decisions of K-12 teachers to enter or leave the profession (Bradley & Loadman, 2005; Elfers, Plecki, & Knapp, 2006; Elfers, Plecki, & McGowen, 2007; Hanushek, Kain, and Rivkin, 2004; Ingersoll, 2001, 2003; Kelly, 2004; Luekens, Lyter, & Fox, 2004; Murnane, 1984; Murnane, Singer, & Willett, 1988; Shen, 1997; Stinebrickner, 1998; 2002; Theobald, 1990). The dependent variable in these studies represents whether a teacher has departed the school/district/state/profession, and independent variables often include the teacher's salary and experience level, characteristics of the students, and characteristics of the school and community. Typically, these studies use a conceptual model such as the one presented in this report to identify particular financial and non-financial factors that may affect whether a teacher decides to leave their school, district, state, and/or profession. The results from many studies such as Murnane and Olsen (1989; 1990) and Dolton and van der Klaauw (1995; 1999), for example, have shown that higher teacher salaries are associated with greater longevity in the profession. In contrast, Hanushek, Kain, and Rivkin (2004) conclude that student characteristics have a

bigger impact than salary on teacher mobility. Elfers, Plecki, and McGowen (2007) showed that schools in the State of Washington with the highest percentage of students of color also had the lowest retention rates of teachers.

There have been several studies conducted in non-education labor markets that have shown that the value of pension benefits has a strong influence on employees' decisions about when to retire (Burkhauser, 1979; Fields & Mitchell, 1984; Hogarth, 1988; Kahn, 1988; Kotlikoff & Wise, 1985; Lumsdaine, Stock, & Wise, 1990, 1995; Pozzebon & Mitchell, 1989; Samwick, 1998). The results suggest that workers do incorporate the financial benefits from pensions into their long-range planning. Furgeson, Strauss, and Vogt (2006) argue that pension benefits could have mixed effects on the retirement decisions of workers. This would arise because on the one hand, as pension values increase, the utility from retiring would also increase and thus entice some workers to retire. On the other hand, as pension benefits rise, workers might have an incentive to stay employed longer and earn even higher pension benefits.

The literature on the effects of pension benefits on the labor market decisions of educators is surprisingly thin given the potential importance of the topic. Hanushek, Kain, and Rivkin (2004) and Strauss (1993), for example, studied how selected factors such as salary – but not pension benefits -- affected the retirement decisions of teachers. Hanushek, Kain, and Rivkin (2004, p.239) note: "Fringe benefits are an important and growing share of compensation…Unfortunately, we, like all past researchers, lack information on fringe benefits." The most complete analysis of teacher pension benefits was conducted by Furgeson, Strauss, and Vogt (2006), who studied the effects of pension benefits on the decisions of teachers in Pennsylvania to retire. In addition to using control variables for years of experience, age, salary, and demographic characteristics of teachers, the models included the present value of current

pension benefits and the present value of the best future pension benefits to help explain why teachers retired. They reported that increases in the current value of pensions increased the probability of a teacher retiring and found some evidence that teachers who have the promise of higher future pensions are less likely to retire in the current time period. Furgeson, Strauss, and Vogt (2006) also found that teachers were more likely to retire when they reached eligibility requirements for full benefits.

The literature on the labor market decisions of school administrators is very sparse. As noted by Lochmiller, Angel, Plecki, and Elfers (2007, p.1), "Very few studies have considered characteristics at different levels of the education system to understand how, if at all, these characteristics interact and therefore contribute to turnover among school principals." Some studies, such as Galvin and Sheppard (2000), Forsyth and Smith (2002), and Plecki, Elfers, Loeb, Zahir, and Knapp (2005) have documented the retention and mobility of school principals in specific states, but did not delve into the possible explanations for mobility. Akiba and Reichardt (2004) found that the mobility of elementary school principals in Colorado was unrelated to the socioeconomic status of the community or the racial composition of the student body; however, Gates et al. (2004) concluded that principal mobility in Illinois and North Carolina was affected by the racial composition of students. Studies by Lochmiller et al. (2007), Chen, Liu, and Strauss (2007), Akiba and Reichardt (2004), Norton (2002), and Kimball and Sirotnik (2000) showed that salary had a significant effect on principal mobility. The Lochmiller et al. (2007) study further found that the urbanicity of the school district influenced the mobility of principals. Carr (2003) argued that the structure of state pension benefits provides a disincentive for teachers to consider becoming administrators because administrators more frequently move between districts and states and may lose pension benefits when they move.

Theoretical Importance of Retirement Benefits for School Administrators

This section of the report explores the conceptual reasons why the design aspects of pension plans might have an effect on the labor market decisions of school administrators. The model presented in this section is similar to the framework used by many researchers to examine the labor market choices made by workers. An important extension is made to the model, however, to examine the role that retirement benefits play in the employment decisions of school administrators. The framework is also useful for highlighting the assumptions that are made when making predictions about the effects of state pension plans on these decisions. Although the discussion of the model is in relation to decisions made by school administrators, it is important to note that the same model could apply to the employment decisions made by teachers.

Studies of the career decisions of educators such as those discussed in the previous section of this report often rely on a conceptual model such as the following to posit how specific factors might affect the choices made by school administrators with regard to the state (denoted by subscript j) in which they will opt to work.[3] The model begins by assuming that the administrator can estimate his or her lifetime earnings (Y_j), net lifetime retirement benefits (b_j),[4] and non-financial benefits that they would receive from living in the state (Z_j) as follows:

(1) Net lifetime earnings while working: $Y_j = \sum_{t=1}^{t=w} Y_{jt}$

(2) Net lifetime pension benefits during retirement: $b_j = \sum_{t=w+1}^{t=w+r+1} b_{jt}$

[3] See Hanushek, Kain, and Rivkin (2004) for a similar model to explain the school district choice of educators. Furgeson, Strauss, and Vogt (2006) use a similar approach to focus on the retirement decision of educators.

[4] In a fuller treatment, the expected lifetime earnings and benefits would have to be discounted to take into account the effects of inflation. To simplify the discussion, it is implicitly assumed that all earnings and benefits have been discounted.

(3) Net lifetime non-financial benefits: $Z_j = \sum_{t=1}^{t=w+r+1} Z_{jt}$

where w = intended number of years of employment, and r = intended number of years in retirement. The factors in Z_j capture the non-monetary benefits that a school administrator would receive from living in a particular state due to factors such as the geographic location of the state and the proximity to a person's family.

It is then assumed in the model that the school administrator can calculate the expected utility or satisfaction that he or she would receive from choosing to work in each state (U_j) as follows:

(4) Expected utility from working in state j: $U_j = f(Y_j, b_j, Z_j, M_j)$

where M_j = cost of moving to a particular state ($M_j = 0$ for the state in which the school administrator currently resides), and $f(\ )$ = functional relationship between these four components and utility. Equation (4) illustrates that the utility that a school administrator would expect to receive from working in each state is determined in some way by his or her combination of expected earnings, net lifetime retirement benefits, non-financial benefits, and moving costs. To illustrate, suppose that a 30-year-old school administrator intends to work up through age 65 and then receive retirement benefits through age 85. The administrator's expected lifetime utility from working in a given state would be affected by the sum of expected earnings from ages 30 through 65, the sum of expected retirement benefits from ages 66 through 85 (if assumed that benefits would be received through age 85), the utility received from the non-financial attributes of the state to the person, and the cost of moving to state j:

(5) $U_j = f\left(\sum_{t=30}^{t=65} Y_{jt}, \sum_{t=66}^{t=85} r_{jt}, \sum_{t=30}^{t=85} Z_j, M_j\right)$

It is typically assumed in this model that the person's utility increases as the income, net financial benefits, and non-financial benefits rise, and utility decreases as the cost of moving to a state rises. The equation does not say precisely how much utility would change due to changes in these factors, nor how utility is determined from the combination of these factors.

The impact of gross pension benefits and personal contributions to pension plans on a school administrator's utility can be seen by redefining net retirement benefits, b_j, as the gross retirement benefits received, B_j, minus the personal contributions that the school administrator must make to participate in the retirement plan, C_j:

(6) Net benefits = gross benefits – gross contributions: $b_j = \sum_{t=w+1}^{t=w+r+1} B_{jt} - \sum_{t=1}^{t=w} C_{jt}$

If equation (6) was substituted into equation (4), it could be shown that the gross lifetime pension benefits have a positive effect on a school administrator's utility, and total personal contributions would have a negative effect on utility.

Given the assumptions about school administrator behavior, Equation (4) leads to several predictions about how selected factors would impact the utility received by a school administrator from working in a state. The equation would predict that school administrators would receive more utility or satisfaction from being employed in a state when there are:

- ✓ Increases in expected future earnings
- ✓ Increases in expected gross pension benefits
- ✓ Increases in expected non-financial benefits
- ✓ Decreases in expected personal contributions to the pension plan
- ✓ Decreases in the cost of moving to a state
- ✓ Increases in the length of expected employment
- ✓ Increases in the length of expected retirement

It is important to understand that according to this model, school administrators base their employment decisions on the satisfaction or utility that they would attach to working in each state, and not solely on the financial benefits of working in each state. The model also allows for the amount of additional utility received due to each of these factors to vary across individuals. A $1000 increase in annual salary, for example, could lead to a large increase in utility for one administrator and a smaller increase for another administrator. The expression for utility in equation (4) is deliberately general so that it would apply to all individuals. The only assumption that is made is that each of these factors has a particular directional effect on utility, such as increases in the personal contributions to pension plans would reduce the administrator's utility from working in a state.

This conceptual model of utility can then be used to examine how school administrators would be predicted to make decisions about which state to choose for their employment, and how selected factors such as pension benefits affect this decision. According to the model, a school administrator will choose to work in state j provided that the expected lifetime utility from doing so is greater than what the person would receive in all other states, as shown in equation (7):

(7) Administrator would choose state j if $U_j > U_k$ for all $k \neq j$

Note that based on this model, both the financial and non-financial aspects of working in a state affect each person's decision about which state to work in for his or her career. This means that although the financial incentives for administrators (salary and benefits) would play a part in their employment decisions, non-financial attributes of each state are also part of the decision-making process. Some administrators may choose to work in State A rather than State B even if the salaries and pension benefits in State B are more generous than in State A, if the gains in

non-financial benefits from working in State A exceed the non-financial benefits from State B. The conceptual model does not specify precisely how each of these factors would affect a school administrator's employment decision, and the decisions can and do vary across individuals.

This theoretical framework is particularly useful for showing how all of these factors – future earnings, retirement benefits, personal contributions to retirement plan, cost of moving, and personal attributes -- could have an influence on the state chosen by a school administrator in which to work. Through this type of model, for example, it could be shown that holding all else constant, school administrators would be more likely to choose to work in states where the level of administrator pay is higher.

Of more relevance for this study is the issue of what the conceptual model would say about how attributes of a state's pension plan would affect the location decisions of school administrators. The model would predict that school administrators are more likely to choose to work in states where the gross retirement benefits are higher or the personal contributions to the state's retirement plan are lower. This would occur because as the gross pension benefits rise or the personal contributions to the pension plan fall, the financial benefits of working in a state will rise, which in turn would be predicted to increase the administrator's utility from working in the state. This rise in financial benefits would make the state relatively more attractive and the change may be large enough to entice some administrators to alter their decision as to where to work. For other administrators, though, the change in utility resulting from the higher pension benefits or lower personal contributions may not be sufficient to lead to a change in their decision. All that can be said through the conceptual model is that as benefits rise or contributions fall, school administrators become *more likely* to prefer working in a given state.

The conceptual model can be used to derive several additional predictions about how the design attributes of a state's pension plan may affect the location decisions of school administrators. To see this, gross retirement benefits (*B*) must be broken into separate components as shown in equation (8). The annual pension benefit in a state's defined benefit plan is found by multiplying the school administrator's final average salary ($\overline{Y}$) by the formula multiplier (α) and the years employed in the state (w):

(8) Benefit = average salary x multiplier x service credit: $B_{jt} = \overline{Y}\alpha w$

The final average salary is the average salary for the school administrator over the last few years of employment in the state (typically three to five years). The formula multiplier is a parameter, such as two percent, that is set by the state. The years of employment are often referred to as the years of service credit, and school administrators may be permitted to purchase additional years of service credit, subject to limitations, for time worked in other states. The annual pension benefit may also be capped by the state if it exceeds a specific threshold, such as 90% of the final average salary.[5] Because increases in gross benefits would be predicted to raise utility and hence the likelihood that a school administrator chooses a particular state, and further that increasing any of the three components ($\overline{Y}$, α, and w) would increase gross benefits, it follows that a school administrator's utility and chance of choosing a particular state would also increase when either the final average salary, formula multiplier, or years of service credit increase. If increasing the number of years used in the final average salary calculation reduces the final average salary, then this increase would be predicted to lower the likelihood of a school administrator selecting a specific state. Finally, the effect of the time needed for eligibility for

[5] The cap on annual salary benefits would affect equation (8) by setting the benefits equal to the minimum of the cap (m% of final average salary) or the formula, as in $B_{jt} = \min\{m\%\overline{Y}, \overline{Y}\alpha w\}$.

retirement (*w*) on utility and the likelihood of selecting a state cannot be determined *a priori*. On the one hand, as w increases career earnings will rise (equation [1]), but gross retirement benefits will fall (equation [2]). There is also a possible tradeoff in utility in that the administrator may not receive equal satisfaction from working and being retired.

The same theoretical model can be used to help explain how selected factors might affect a school administrator's decision to move to another state versus staying in his or her current state. In this discussion, it is assumed that a school administrator begins his or her career in state j and then considers moving to state k after a certain amount of time. Accordingly, the school administrator's expected lifetime utility if he/she started their employment in state j and then moved to state k would include the salary, benefits, and non-pecuniary benefits received from both states during the specific durations in each state, and the costs of moving to each state, as depicted in equation (9):

(9) Utility if worked in two states: $U_{jk} = f(Y_j, Y_k, b_j, b_k, Z_j, Z_k, M_j, M_k)$

The school administrator would then find it to be in his or her best interest to move to state k if $U_{jk} > U_j$, and otherwise it would not be to his or her advantage to move. For a move to occur in this model, the expected benefits of moving must outweigh the costs of moving (Hanushek, Kain, & Rivkin, 2004).

It is important to note, however, that the income, retirement benefits, and non-financial benefits from the first state (j) in equation (9) will all be smaller than they were in equation (4) because in this example the administrator worked fewer years in state j. Furthermore, the incomes earned in states j and k will depend not only on the number of years worked in each state, but also the order in which the years were worked. Because salaries typically increase along with years of experience, it is most likely the case that the annual incomes earned for each

year in the first state (j) will be smaller than the annual incomes earned for each year in the second state (k).

Although the net pension benefit streams from the two states, b_j and b_k, are a bit more difficult to compute with certainly, in most cases it is expected that holding salaries, total experience, and all else constant, moving from one state to another would result in a reduction in a school administrator's annual pension benefits. Because the annual pension from each state is based on the final average salary from employment in the state, school administrators who move from one state to another will have a smaller final average salary applied to all of the years of service credit earned in their first state. The theoretical model can be used to show that in general, the loss in pension benefits is greatest for school administrators who are in the middle of their careers. As noted by Carr (2003, p.18): "The lack of reciprocity among state retirement systems is another stumbling block (for school administrators). As they move up the ladder, administrators often move from district to district and state to state, losing retirement benefits along the way…" The loss in annual pension benefits from moving might be reduced if the first state imposes a cap on the annual pension benefit because the benefits at this point would have begun to slow down with additional years of service credit. Likewise, states can offer incentives such as higher salaries and optional retirement annuities to offset the loss in pension benefits that might arise from moving.

The vesting of retirement benefits also needs to be taken into account in the calculation of retirement benefits for the school administrator. The gross state retirement benefits B_j would only be received by the school administrator if he/she worked in the state for a minimum number of years (denoted v_j). If the number of years worked in a state is less than the number of years needed for vesting ($w < v_j$), then $B_j = 0$ for the state in question. Vesting could therefore come

into play in two ways for school administrators. First, an administrator would have an added incentive to work at least v_j years in the first state (j) so that they can keep the retirement benefits earned in the first state. Second, an administrator would want to ensure that they would work at least v_k years in state k so that they can keep the retirement benefits earned in the second state. This model therefore predicts that school administrators would be less likely to consider moving to another state either very early in their career (before they have become vested in the first state) or very late in their career (when they would not plan on working long enough to become vested in the second state).

It is important to keep in mind that the predictions of school administrative behavior that are obtained from this model are conditional on individuals being able to understand how the various components of pension plans affect their net lifetime benefits. If individuals understate the effect of a specific change in the pension plan on benefits, such as from a reduction in the cap on annual pension benefits, then their reaction to the change would be less than would be predicted by the model. Given the number of factors that are involved in estimating the lifetime financial benefits from pension plans, it is quite likely that many school administrators do not fully comprehend how their net pension benefits would compare across states, nor how they would be affected by specific differences in the pension plans.

Part II: Review of School Administrator Pension Plans in Six States

This section of the report provides a detailed explanation of how the state retirement plans for educators operate in six states. Comparisons are made on the parameters used in the retirement programs for Indiana and five other states: Florida, Illinois, Kentucky, Michigan, and Ohio. These states were selected due to concerns among state policy makers in Indiana that these states may attract Indiana administrators at some point in their career given their close

geographic proximity to Indiana or, in the case of Florida, its status as a popular retirement destination. Table 1 provides an overview of selected aspects of the retirement programs for educators in each of the six states. In all six cases, the retirement plans cover both teachers and administrators, and Florida's system also includes other municipal employees.

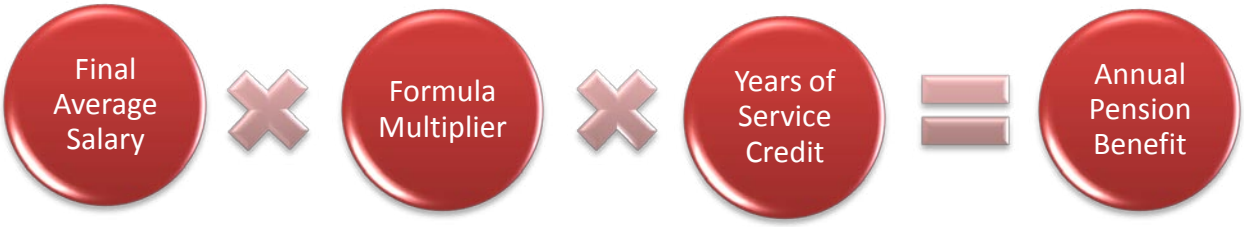
Table 1. Overview of Retirement Programs for School Administrators in Six States

Attribute	**Indiana**	**Florida**	**Illinois**	**Kentucky**	**Michigan**	**Ohio**
Name of Retirement System	Indiana State Teachers' Retirement Fund	Florida Retirement System	Illinois Teachers' Retirement System	Kentucky Teachers' Retirement System	Public Schools Employee Retirement System	State Teachers' Retirement System of Ohio
School Administrators Included	Yes	Yes	Yes	Yes	Yes	Yes
Retirement System Assets*	$8.3 Billion	$109.9 Billion	$38 Billion	$14.2 Billion	$64.03 Billion	$67.96 Billion
Year Established	1921	1970	1939	1938	1945	1919
System Has Municipal or State Employees	No	Yes	No	No	No	No

**Source*: National Council on Teacher Retirement (assets as of March 2006).

The retirement programs in each of these states are defined benefit plans in which the administrator is guaranteed a specific annual payout for each year during retirement. The payout is set according to a formula established by the state. In this way, the state assumes the risk for guaranteeing the payout for administrators. The basic formula used for calculating the annual pension benefits in a defined benefit plan is to multiply the final average salary by the formula multiplier and the years of service credit, as depicted in Figure 1:

Figure 1. Formula for Calculating Annual Pension Benefits



Although all six states use this general formula for determining the annual pension benefits for their school administrators, the plans can vary considerably in the details of how each component is calculated. These variations can then lead to substantial differences in the defined benefit levels received by school administrators after they retire. States and school corporations within states can also offer supplementary retirement benefits in the form of annuities. For example, Indiana provides administrators with an additional benefit in the form of an annuity savings plan where three percent of a person's annual salary is contributed by the school corporation to the annuity. Some school districts in Texas also provide school administrators with supplemental retirement benefits in the form of annuities (Texas Association of School Boards, 2007) and many states, such as Ohio, offer optional defined contribution plans that members may select in lieu of their defined benefit plan. Annuities such as these should be counted in the lifetime pension benefits provided by a state as long as school administrators did not have to make personal contributions to receive the additional retirement benefit. However, annuities where all contributions are made by the administrator should not be considered to be state-provided benefits. The report now turns to examining each of these three components in more detail and how the six states compare to each other on the components.

Calculation of Final Average Salary

The final average salary represents the average salary for a school administrator over a specific number of years. Typically, the final average salary will be calculated based on a given number of years of employment at the end of an administrator's career or a designated number of years with the highest salary. Ford (2005) showed that the number of years used in the calculation varies from three to five, with the majority of state pension plans using three years in the final average salary calculation. In general, as the number of years in the calculation increases, the final average salary will decrease because one or more years with lower salaries are being averaged into the final figure. Table 2 shows how the six states compare to each other in terms of their final average salary calculations:

Table 2. Final Average Salary Calculations for Six States

State	**Description of Final Average Salary Calculation**
Indiana	Average of the five **(5)** highest years of salary earned during the employee's career
Florida	Average of the five **(5)** highest years of salary earned during the employee's career
Illinois	Average of the four **(4)** highest consecutive annual salaries earned within the last 10 years of creditable service
Kentucky	Average of the three **(3)** highest annual salaries if employee has 27 years of Kentucky service and is at least 55 years of age; otherwise, the average of five **(5)** highest annual salaries is used
Michigan	Average of the three **(3)** highest consecutive annual salaries
Ohio	Average of the three **(3)** highest years of annual salaries earned in Ohio

Table 2 shows that Indiana and Florida have the highest number of years used in the calculation of the final average salary. Holding all else constant, this would lead to slightly

lower final average salaries being used to determine the annual defined benefit. At the other extreme, Kentucky, Michigan and Ohio base the final average salary on only three years of data. It should also be noted that Illinois and Michigan require the years used in the final average salary calculation be consecutive. Finally, both Kentucky and Ohio have specific rules that the salaries must have been earned in their respective states, and Kentucky varies the number of years based on the years of service credit earned in the state.

Formula Multipliers

The formula multiplier is the second part of the defined benefit formula. The formula multiplier is the percentage of a school administrator's final average salary (for each year of service) that he or she would receive in the form of an annual pension from the state. For example, a multiplier of two percent means that for each year of service credit, an administrator would receive a defined benefit in retirement of two percent of his/her final average salary. Across the nation, the formula multipliers vary between 1.1% and 2.5% per year of service credit, with almost every state using a multiplier of at least 1.5% (Ford, 2005). Obviously, as the formula multiplier increases, so will the annual pension benefit received by school administrators.

One important aspect that is often overlooked when making comparisons of the formula multipliers between states, however, is that states also vary in whether they allow school administrators to retain their Social Security benefits along with their state pension. It is usually the case that states that use higher formula multipliers do not allow school administrators to receive Social Security benefits. This reduction in benefits is partially offset by the fact that when school administrators do not receive Social Security benefits, they also do not have to contribute 7.65% of their annual salary to the Social Security pension plan. Both the benefits

and the costs of contributing to Social Security need to be taken into account when making comparisons across states in the attractiveness of their defined pension plans. It is possible, however, that administrators overlook these factors when making comparisons across states. Table 3 shows how the six states compare to each other in terms of their formula multipliers.

Table 3. Formula Multipliers Used in Six States

State	Formula Multipliers	Are Social Security Benefits Retained by Administrators?
Indiana	1.1% for all years of service	Yes
Florida	1.6% for all years of service	Yes
Illinois	2.2% for all years of service	No
Kentucky	2.5% for all years of service	No
Michigan	1.5% for all years of service	Yes
Ohio	2.2% for years 1-30, 2.5% for year 31, 2.6% for year 32, increments continue up to 100% of final average salary	No

The 1.1% formula multiplier for Indiana is not only the smallest within the group of six states considered in this study, it is also the smallest in the entire nation (Ford, 2005). It should be noted that the three states with the lowest formula multipliers – Indiana, Florida, and Michigan – all allow administrators to also receive Social Security benefits after retirement. Ohio relies on a graduated series of formula multipliers that increase along with years of service up to the point where the administrator is receiving 100% of his/her final average salary.

Years of Service Credit

Finally, the third part of the state pension formula is the years of service credit for each administrator. The calculation of years of service credit is perhaps the most complicated portion of the defined benefit formula because of the many restrictions and options for school administrators with regard to determining their years of service credit. The years of service credit represent the length of time that an administrator has been employed in education at some capacity. States even vary in terms of the specific definitions of a year of service credit, as shown in Table 4:

Table 4. Definitions of Year of Service Credit in Six States

	Indiana	**Florida**	**Illinois**	**Kentucky**	**Michigan**	**Ohio**
Calculation of a Year of Service Credit	One year of service credit is earned for 120 days of service in a fiscal year.	Nine months of service count for one year of credible service. A month is earned for each month in which a member receives a salary payment.	One year of service credit is earned for any school year in which employed and received salary for 170 days.	One year of service credit is earned if the employee is paid for 180 days of a 185 day contract.	One year of service credit is earned when employee works 1,020 hours in a fiscal year.	One year of service credit is earned for 120 days or more.

Indiana and Ohio, for example, both define a year of service credit as the administrator having worked 120 or more days in a given year. Other states base their calculations of a year of service credit on months (Florida) or hours (Michigan) worked during the year.

Under certain circumstances, school administrators can increase their years of service credit beyond the totals calculated in Table 4. Some states permit school administrators to obtain years of service credit for reasons such as military service, pregnancy, and leaves of absence. Of particular interest here is that most states allow school administrators who have worked as educators in other states to purchase additional years of service credit. By purchasing additional years of service credit, school administrators can increase the pension that they would receive in their new state. However, it is common for states to require administrators to work a certain number of years in the state before being able to purchase additional years of service credit for service earned in other states. States with lower minimums on the required years of in-state service would thus be more attractive to administrators from other states who might consider moving at some point in their career. Another limitation is that states usually impose caps on the number of years of service credit that can be purchased for out-of-state service. Finally, states usually prohibit school administrators from "double counting" years of service credit in two states. In order to purchase years of service credit for out-of-state service, a school administrator would have to relinquish the benefits from the same number of years of service credit in the first state of employment. Table 5 provides a summary of how the six states compare to each other in terms of the rules for purchasing additional years of service credit:

Table 5. Rules for Purchasing Years of Service Credit for Out-of-State Service in Six States

State	# Years of In-State Service Required to Purchase Years of Service Credit	Rules for Purchasing Years of Service Credit for Out-of-State Service	Maximum Years Purchased for Out-of-State Service
Indiana	10	1 year out-of-state service for every 5 years of Indiana service earned	None
Florida	1	Must have matching in-state service credit	5 Years
Illinois	5	Cannot exceed two-fifths of total creditable service	10 Years
Kentucky	1	1 year out-of-state service for every 2 years in-state service, or 10 years out-of-state credit for 10 years in-state service	10 Years
Michigan	5	Out-of-state service credit cannot exceed in-state service credit	15 Years
Ohio	1	Must have matching in-state service credit	5 Years

With regard to years of in-state service required to purchase additional years of service credit, Indiana has the lowest rate of exchange between in-state and out-of-state service in order to purchase additional years of service credit. Indiana's rule allowing school administrators to only purchase one year of service credit for every five years of in-state service means that administrators who move to Indiana for the last 10 years of their career would be able to purchase a maximum of two years of out-of-state service credit. This could serve as a disincentive to school administrators in other states to move to Indiana late in their careers because they might be concerned that they would not be able to work long enough in Indiana to purchase additional years of service credit. Furthermore, this would be particularly important if an administrator has worked in multiple states and has not vested in them all. At the other

extreme, Florida, Kentucky, and Ohio only require one year of service in-state before being allowed to purchase additional years of service credit. However, administrators would still need to be vested in the pension plan in order to receive the benefits from the purchased years of service credit. Turning to the caps on years of outside service that can be transferred, it can be seen that all of the states except Indiana impose limitations on the maximum number of years of service credit that can be transferred from other states. The most generous state among the six examined here is Michigan, where administrators can transfer up to 15 years of service credit. Alternatively, Florida and Ohio limit school administrators to purchase a maximum of five years of service credit. Although Indiana does not impose a specific cap on the number of years of service credit that can be purchased for out-of-state service, the fact that administrators can only purchase one year of credit for every five years of in-state service acts as a cap on the total years that could be purchased. In all six states, school administrators are prohibited from double counting years of service credit.

Restrictions on Pension Benefits

A further complication in determining the level of defined benefits for school administrators under state-run pension plans is that the state may place limits on the maximum retirement benefit that a person can receive. The state can limit the annual benefit payouts by either specifying that the annual pension benefit cannot exceed a specific percentage of the person's final average salary, or limiting the number of years of service credit that can be used for calculating pension benefits. Ford (2005) showed that more than half (48) of the 85 pension plans he reviewed in 2004 imposed no restriction on the annual pension benefit, 16 restricted the annual pension payout to be no more than 100% of the final average salary, 17 states imposed a maximum annual pension benefit of less than 100% of the final average salary, and 4 plans

limited the number of years of service credit that could be used. Such restrictions would limit the annual payout to the administrator in retirement and in turn would make it relatively more attractive for a school administrator to move to another state after reaching the maximum. The restrictions used in the six states are shown in Table 6.

Table 6. Restrictions on Annual Pension Benefit in Six States

State	Maximum Annual Benefit Payout
Indiana	None
Florida	100% of final average salary
Illinois	75% of final average salary
Kentucky	100% of final average salary
Michigan	None
Ohio	100% of final average salary

Neither Indiana nor Michigan imposes a cap on the payout that administrators can receive from the state's pension plan. In contrast, Florida, Kentucky, and Ohio all have provisions that limit the annual payout for a school administrator to be no more than 100% of his/her final average salary. The most restrictive pension program is in Illinois, where the annual payout cannot exceed 75% of the administrator's final average salary. None of the six states place caps on the years of total service credit that school administrators can use in calculating their annual pension benefits.

Eligibility for Retirement and Vesting

State pension plans differ in terms of when school administrators are permitted to retire and receive full pension benefits. As the length of time needed to attain full retirement benefits in a state increases, holding all else constant, the state would be expected to be less attractive to school administrators unless the utility from foregone salary exceeds the gain in utility from income in an additional year in retirement. To be eligible for retirement, school administrators must generally meet any one of several designated combinations of age and years of service. Most every state allows school administrators to retire with full pension benefits once they have reached the state's standard retirement age, which is typically somewhere between the ages of 60 and 65.

School administrators who have not reached the standard retirement age may still be able to retire with full pension benefits if they meet other criteria. Ford (2005) showed that only 2 of the 85 pension plans restricted normal retirement to only those school administrators who were 65 years old. Some of the alternatives to normal retirement eligibility are referred to as "Rule of Y" plans, where Y represents the sum of a person's age and years of service in the state (Ford, 2005). In this option, a person whose age plus years of service credit exceed Y would be able to retire with full pension benefits even if he or she has not reached the standard retirement age for the state. For example, Indiana uses a "Rule of 85" to determine retirement eligibility, meaning that a person's age plus years of service must total at least 85, along with being at least a minimum age designated by the state (such as 55), in order to be eligible for full retirement benefits. Eighteen of the 85 pension plans had a "Rule of Y" alternative for retirement eligibility (Ford, 2005). Other states use an "X Years and Out" option where an administrator can retire at any age or a minimum age provided that he/she has accumulated a certain number of years of

service credit. Ford (2005) found that 55 pension plans had some type of "X Years and Out" alternative to standard retirement.

States also vary with regard to how many years of service in-state are required for a school administrator to become vested in the state's pension plan. Vesting refers to the minimum number of years of service credit that must be earned in-state for school administrators to keep their pension benefits after retirement. Vesting is also an important consideration for school administrators who are considering moving to another state. If a school administrator were to leave a state prior to becoming vested in the state's pension plan, then the person would forfeit the right to receive a pension from the state. Therefore, states with greater numbers of years required for vesting would be less attractive to school administrators, and these states may have a more difficult time attracting administrators from other states to relocate late in their careers. Another implication of vesting is that school administrators are likely to be less mobile at the start and the end of their careers. Ford (2005) showed that the majority of pension plans (49 out of 85) required five years of in-state service before the school administrator would be vested in the pension plan. At the high end, 18 of the pension plans required 10 years for vesting, and 13 pension plans required fewer than five years for vesting (Ford, 2005).

Table 7 contains a summary comparing the six target states in terms of years of service needed to retire with full benefits, and the minimum length of time required for retirement benefits earned to be fully vested. Each state provides for a standard retirement at either age 65, 62, or 60 regardless of years of service credit, as long as the administrator is fully vested in the retirement program. Both Indiana and Ohio require administrators to be at least age 65 under the standard option, whereas the minimum standard retirement age is 62 in Florida and Illinois and age 60 in Kentucky and Michigan.

Table 7. Retirement Eligibility and Vesting Rules for Six States

State	Options for Retirement Eligibility (must meet one of the following)	Years Needed for Vesting
Indiana	1. Age 65 and vested 2. Age 60 and 15+ years service credit 3. Age 55 and meets "rule of 85"	10
Florida	1. Age 62 and vested 2. Any age and 30 years service credit	6
Illinois	1. Age 62 and vested 2. Age 60 and 10+ years service credit 3. Age 55 and 35+ years service credit	5
Kentucky	1. Age 60 and vested 2. Any age and 27+ years service credit	5
Michigan	1. Age 60 and vested 2. Any age and 30+ years service credit	10
Ohio	1. Age 65 and vested 2. Any age and 30+ years service credit	5

The alternatives for qualifying for retirement in Indiana and Illinois require slightly more years of service/age than is true in the other four states. Finally, both Indiana and Michigan require administrators to have at least 10 years of in-state service credit before they would be able to be vested in the pension plan. The vesting requirement in Indiana is substantially higher than the requirements in Florida, Illinois, Kentucky, and Ohio. The 10-year vesting requirement in Indiana likely serves as a significant disincentive for school administrators from other states to consider moving to Indiana.

Cost-of-Living Adjustments for Pension Benefits

The state pension plans for school administrators vary further in terms of whether the state provides for adjustments to the annual pension benefits to reflect cost-of-living increases

over time. Those state programs with higher cost-of-living adjustments would be more beneficial to school administrators than other programs with lower cost-of-living adjustments. Ford's review of 85 state pension plans revealed that 61 of the plans provide for automatic adjustments for the cost-of-living each year based on either the Consumer Price Index (CPI) or designated percentage increases. Another 20 pension plans rely on the state legislature to pass variable (ad hoc) cost-of-living adjustments each year. The provisions used in the six states highlighted in this study are shown in Table 8:

Table 8. Cost-of-living Adjustments to Annual Pension Benefits in Six States

State	**Adjustments for Cost-of-Living**
Indiana	Ad hoc (2% average)
Florida	3% per year
Illinois	3% per year
Kentucky	1.5% per year + ad hoc adjustments
Michigan	3% per year
Ohio	Adjusted for CPI, maximum = 3%

There are no automatic cost-of-living adjustments made to the annual pension benefits in Indiana's pension plan; however, the Indiana legislature can provide for inflationary adjustments to the annual pension benefits on a year-to-year basis. The adjustments in Indiana have averaged approximately two percent per year. Three states – Florida, Illinois, and Michigan – make fixed

three percent annual increases in the state retirement payouts per year. Ohio makes payout adjustments equal to the change in the Consumer Price Index (CPI), with the adjustments capped at three percent per year. Finally, Kentucky provides for a fixed 1.5% adjustment per year plus supplemental ad hoc adjustments enacted by the legislature.

Administrator Contributions to State Pension Plans

Up to this point, the discussion has centered on the factors that determine the gross annual pension benefits received by school administrators. It is important to keep in mind, however, that most states require school administrators to contribute a portion of their salary in order to take part in the pension plan. Ford (2005) noted that only 10 of the 85 pension plans he reviewed did not require school administrators to make contributions to their pension plans, and school administrators in 34 plans have to contribute over five percent of their salary each year in order to participate. Ford (2005) further observes that in some states, the employee contribution is paid by the school corporation. In general, as the participant contributions to the pension plan increase, the net annual pension benefit (gross benefit minus contribution) will fall and thus the state should become less attractive to school administrators. The six states reviewed here all have different requirements regarding the contributions that administrators must make to the state pension plans. The requirements are shown in Table 9.

Table 9. Administrator Contributions to Pension Plans in Six States

State	Mandatory Administrator Contributions
Indiana	0% to defined benefit plan, 3% of annual salary to annuity savings plan (3% contribution is paid by employers)
Florida	No mandatory administrator contributions
Illinois	9.4% of annual salary
Kentucky	9.855% of annual salary
Michigan	For administrators earning over $15,000: $510 + 4.3% of salary over $15,000
Ohio	10% of annual salary

Neither Indiana nor Florida requires school administrators to contribute part of their salary to take part in the defined benefit pension plan. As noted earlier, while school administrators in Indiana must contribute three percent of their salary each year towards a supplemental retirement annuity fund, the net cost to school administrators is zero because the employee contributions are almost always paid by the school corporation. Indiana is the only state among the six reviewed here that provides administrators with an additional pension benefit in the form of an annuity in which participation was mandatory. In contrast, Illinois, Kentucky, and Ohio require administrators to make contributions of between 9-10% per year towards their regular pension plans, but administrators do not make 7.65% Social Security contributions in these states. Michigan's pension plan relies on a combination of a flat dollar amount plus a percentage of the person's salary.

State Taxation of Pension Benefits

Finally, states can differ in terms of whether the annual pension benefits for school administrators are subject to state income taxation. Ford (2005) shows that in 24 of the 85 pension plans, all of the pension benefits are subject to state taxation. At the other extreme, the annual pension benefits are totally exempt from state taxes in 21 pension plans. In the remaining 40 pension plans, some portion of state pension benefits is subject to taxation. In addition, the effective tax rates applied to pension benefits may vary due to exemptions and income levels. Indiana and Ohio are the only two states among the six considered here that tax the pension benefits of administrators.

The pension benefits received from Social Security may also be subject to taxation at the state level. Federal law stipulates that up to 85% of Social Security benefits can be taxed at the federal level depending on the income level of the recipient. For couples filing joint tax returns, Social Security benefits are not taxed if the joint income is below $32,000; however, couples earning between $32,000 and $44,000 would have half of their Social Security benefits taxed at the federal level. Couples earning more than $44,000/year would have 85% of their Social Security earnings subject to federal taxes. State taxation of Social Security benefits varies depending on whether school administrators in the state receive a pension from Social Security and also with state tax laws. Ford's (2005) review showed that 26 states completely exempt Social Security benefits from state taxes, and 15 states impose income taxes on some or all Social Security benefits.

Summary of State Pension Plan Comparisons

Table 10 provides a summary of how Indiana compares to the other five states on the various components of the pension plans reviewed here. An asterisk in the second column

indicates that Indiana compares favorably to the other states with regard to the specific attribute, and likewise an asterisk in the third column signifies that other states compare more favorably to Indiana along this dimension. The conclusions as to favorability in this table are based on the theoretical model presented earlier in this report.

Table 10. Summary Comparison of Indiana's Pension Plan to Plans in Five Other States

Attribute	**Indiana Comparison**	
	Favorable	**Unfavorable**
Number of Years Used in Final Average Salary Calculation		*
Formula Multiplier for Years of Service Credit		*
Retention of Social Security Benefits	*	
Years In-State Service Needed to Purchase Service Credit		*
Maximum Number of Transferrable Years of Service Credit		*
Capping of Annual State Pension	*	
Age/Experience Criteria for Retirement		*
Time Required for Vesting of Benefits		*
Cost-of-Living Adjustments		*
Personal Contribution Cost for Pension Plan	*	
State-Paid Annuities	*	
State Taxation of Pension Benefits		*

Overall, the parameters of most of the components in Indiana's pension plan are not as favorable as those for the other five states reviewed here. Indiana's pension plan for school

administrators fares poorly compared to other states in terms of the low formula multiplier, lengthy vesting requirement, constraints on years of service credit that can be purchased for out-of-state service, and the low/unpredictable cost-of-living adjustments to the annual pension benefits. At the same time, Indiana's pension plan compares favorably to other states on several criteria: administrators can retain their Social Security benefits; there is no cap on the annual pension benefits received by school administrators; and there is no cost to administrators to participate in the pension plan.

Part III: Simulation of Pension Benefits in Indiana and Comparator States

To examine the combined effect of the various aspects of the pension plans on the net pension benefits payouts that would be received by administrators in each state, several simulations were conducted. The simulations relied on salary data for a hypothetical educator who worked in the same state from age 22 to 65, spent 10 years as a teacher, 8 years as an assistant principal, 10 years as a principal, and 16 years as a superintendent. The salary figures for each year of service are shown in Table 11:

Table 11. Salary History for Hypothetical School Administrator Used in Simulations

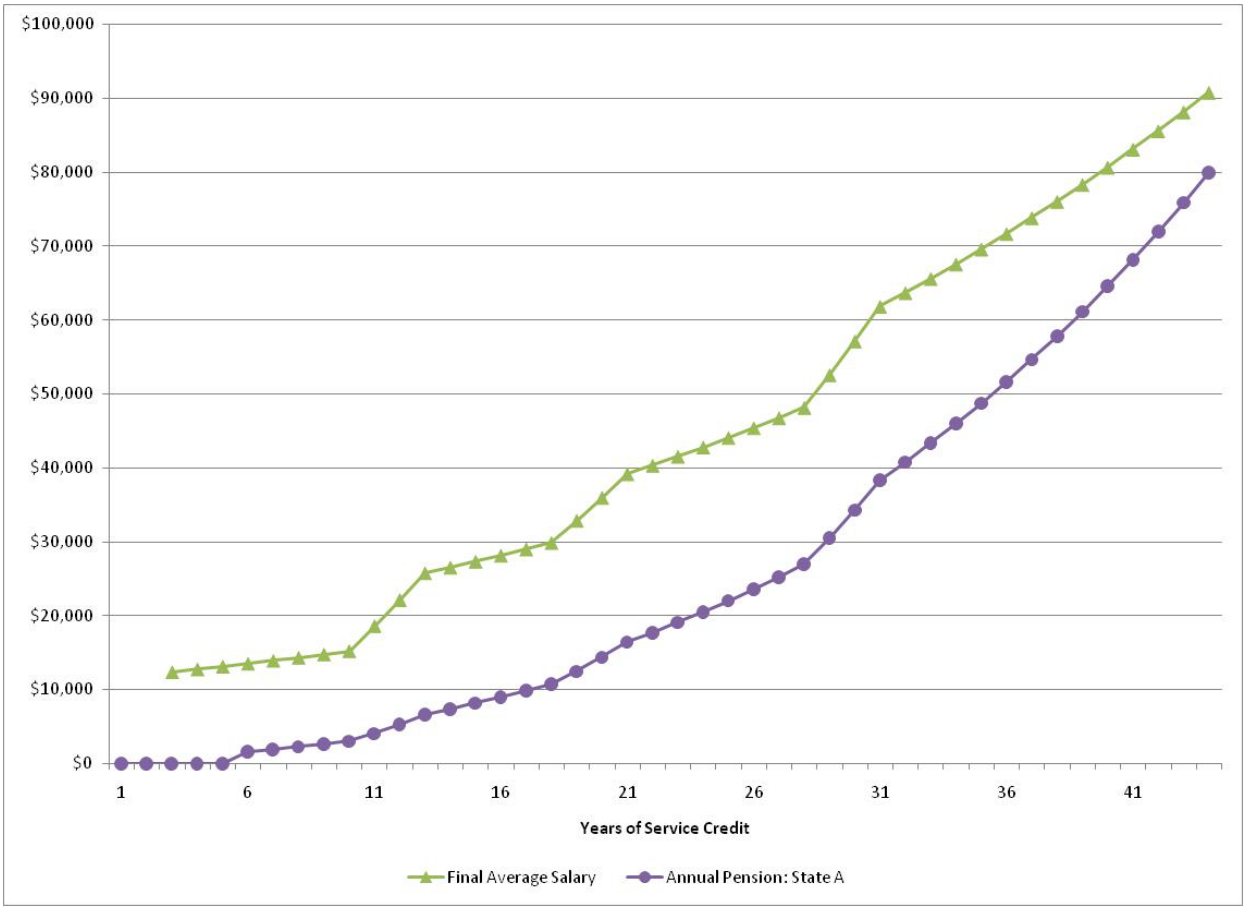
Age	Salary	Age	Salary	Age	Salary	Age	Salary
22	$12,000	33	$25,750	44	$42,769	55	$69,556
23	$12,360	34	$26,523	45	$44,052	56	$71,643
24	$12,731	35	$27,318	46	$45,374	57	$73,792
25	$13,113	36	$28,138	47	$46,735	58	$76,006
26	$13,506	37	$28,982	48	$48,137	59	$78,286
27	$13,911	38	$29,851	49	$49,581	60	$80,635
28	$14,329	39	$30,747	50***	$60,000	61	$83,054
29	$14,758	40**	$38,000	51	$61,800	62	$85,546
30	$15,201	41	$39,140	52	$63,654	63	$88,112
31	$15,657	42	$40,314	53	$65,564	64	$90,755
32*	$25,000	43	$41,524	54	$67,531	65	$93,478

Notes: * Promotion to assistant principal. ** Promotion to principal. *** Promotion to superintendent. Data assume that the individual received a 3% annual salary increase in each year of employment, plus step increases for promotions.

To see how the individual components of a state's pension plan can affect the annual pension benefit, several simulations were conducted. It was assumed that the state used a two percent formula multiplier, calculated the final average salary as the average of the last three years of service, imposed no cap on the annual pension benefit and required five years of in-state service for benefits to be vested. Figure 2 shows how the final average salary (denoted by triangles) and the annual pension benefit (denoted by circles) would change with each additional year of service credit. It should be noted that the annual pension benefit begins at zero until the

number of years for vesting has been reached. It can be seen in Figure 2 that the annual pension benefit grows at an exponential rate because the final average salary is growing exponentially and each subsequent final average salary is being multiplied by a larger number.

Figure 2. Illustration of Final Average Salary and Annual Pension Benefits for Hypothetical School Administrator



Notes: The state pension plan is assumed to have a two percent formula multiplier. The final average salary is based on the average of the last three years of service. No cap is imposed on the annual pension benefit. Five years of in-state service are required for benefits to be vested.

The paths of these two curves show that at some point, the average pension benefit will begin to exceed the final average salary. Table 12 provides a comparison of the annual pension benefits from three different state plans at selected points in time. The first plan is the same as

shown in Figure 3 (formula multiplier = two percent, no cap on annual pension benefit). The second plan uses a 2.5% formula multiplier, but the annual pension benefit is capped at 75% of the final average salary. Finally, the third plan also uses a formula multiplier of 2.5%, but has no cap on the annual pension benefit.

Table 12. Illustration of Effects of Formula Multiplier and Benefit Cap on Annual Pension Benefits for a Hypothetical School Administrator

Years of Service Credit	Final Average Salary	Plan 1: 2% Formula Multiplier, No Cap	Plan 2: 2.5% Formula Multiplier, 75% Cap	Plan 3: 2.5% Formula Multiplier, No Cap
6	$13,510	$1,621	$2,027	$2,027
10	$15,206	$3,041	$3,801	$3,801
15	$27,326	$8,198	$10,247	$10,247
20	$35,962	$14,385	$17,981	$17,981
25	$44,065	$22,033	$27,541	$27,541
30	$57,127	$34,276	$42,845	$42,845
35	$69,577	$48,704	$52,183	$60,880
40	$80,658	$64,527	$60,494	$80,658
44	$90,782	$79,888	$68,086	$99,860

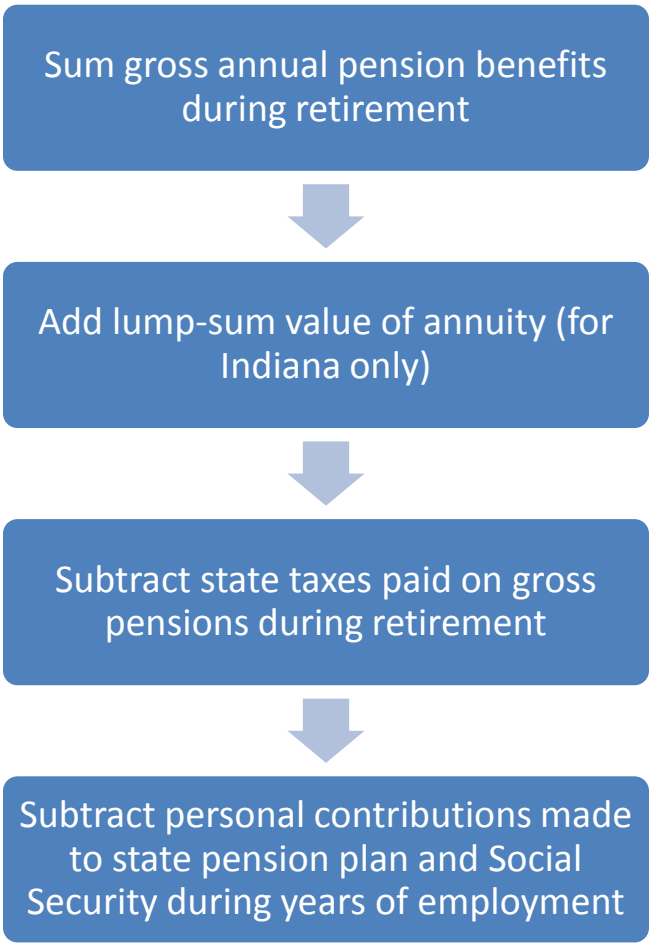
The simulations show that the formula multiplier and the cap on annual pension benefits can have substantial impacts on the annual pension amounts received by school administrators in their retirement. Whereas the second plan may appear to be a more lucrative pension plan than the first plan to many school administrators because the formula multiplier is higher, this is only true for those school administrators who work fewer than 38 years. After this point, the annual pension benefits under plan 1 become larger than in plan 2. The rate of growth in the annual

pension benefit in plan 2 slows considerably once the 75% cap is reached. A comparison of plans 1 and 3 also show that even a small difference in the formula multiplier can have a substantial impact on the annual pension benefits received by school administrators.

Simulations of Pension Plans in Six States

The next set of simulations focus on how the six states compare to each other in terms of the total net benefits received by school administrators. The following formulas explain in more detail how the calculations were made in the simulations. First, the annual pension in each state is calculated by multiplying the final average salary by the formula multiplier and years of service credit. Recall that in some states, the annual state pension may be capped by the state if it exceeds the thresholds shown in Table 6. The annual total pension for the administrator in each year is found by adding together the annual state pension with the Social Security benefit (when applicable). The total net pension benefits that the school administrator would receive in each state depends on the number of years for which benefits are received, the annual pension benefit, the annuity savings, state income taxes paid, and employee contributions, as depicted in Figure 3:

Figure 3: Calculation of Net Lifetime Pension Benefits



The first block represents the total pension payouts that the school administrator would receive for all years during his or her retirement. The second block captures the value of the additional retirement annuity plan in Indiana. The third block includes any state taxes that would be paid by the school administrator during retirement on the state and Social Security pensions received. Finally, the last block represents the total contributions made by the school administrator into the state pension plan or Social Security during his/her years of employment.

The following is a list of key assumptions used in the simulations:

1. The administrator will receive retirement benefits up through either age 75 or age 85 (two sets of simulations).
2. There are no changes in the retirement programs during the time that the administrator is retired.
3. Inflation will equal three percent per year for every year pre- and post-retirement.
4. Annuity savings contributions earn six percent interest per year.
5. Indiana school corporations pay the three percent mandatory employee contributions for the retirement annuity.
6. Indiana provides a two percent annual cost-of-living increase in pension payouts.
7. Administrators in Illinois, Kentucky, and Ohio do not make annual Social Security contributions of 7.65% of salary over the course of their career.
8. The annual pension from Social Security for the administrator is estimated based on the final income shown in Table 11, assuming that the administrator is not married.[6]
9. Annuity savings in Indiana are withdrawn on a scheduled basis ($22,000/year for 10 years or $14,200/year for 20 years). These amounts allow the administrator's annuity to be used up by the end of the retirement period.

Table 13 contains the calculations for the annual total pension in each of the six states for the administrator shown in Table 11. Column 2 contains the final average salary. Column 3 shows the formula multiplier used by each state. The fourth column shows that in each instance, it is assumed that the administrator has 44 years of service credit based on the years worked in

[6] The online calculator can be accessed at: http://www.dinkytown.net/java/SocialSecurity.html#calc.

Table 11. The annual state pension is provided in column 5, and the sixth column shows the estimated Social Security pension of $22,809 for those states where the administrator retains Social Security benefits. Finally, the last column sums the annual state and Social Security pensions to give the overall annual pension.

Table 13. Comparison of Annual Pension Benefits for Hypothetical School Administrator Across Six States

State	Final Average Salary**	Multiplier	Years of Service Credit***	Annual State Pension	Annual Social Security Benefit	Annual State Pension + Social Security
Indiana	$88,189	1.10%	44	$42,683	$22,809	$65,492
Florida	$88,189	1.60%	44	$62,085	$22,809	$84,894
Illinois*	$89,473	2.20%	44	$67,105	$0	$67,105
Kentucky*	$90,782	2.50%	44	$90,782	$0	$90,782
Michigan	$90,782	1.50%	44	$59,916	$22,809	$82,725
Ohio*	$90,782	2.2% to 3.8%	44	$90,782	$0	$90,782

* Kentucky, Illinois, and Ohio annual state pensions affected by maximum payout. ** Depends on # years used in calculation. ***Assumes no additional years of service credit purchased.

The second column shows that the differences in the number of years used in the final average salary calculation have relatively minor impacts on the figure subsequently used in the pension calculations. Of course, the differences could be much larger for an administrator with an uneven salary pattern during the final years of employment. When the values in columns 2-4 were multiplied together, substantial differences surface in the annual state pensions across states (column 5). Indiana's annual state pension benefit ($42,683/year) was the lowest of the six

states, and was less than half of the state pensions that the administrator would receive in Kentucky and Ohio. It is important to note that the annual state pension for the school administrator in Illinois was reduced substantially due to the restriction that the annual pension benefit cannot exceed 75% of the administrator's final average salary. The figures in column 5 alone would be misleading, however, because they do not take into account the fact that school administrators in Indiana, Florida, and Michigan also receive a pension through Social Security. When added together, the annual total pension in Indiana ($65,492) is still the lowest among the six states, but the gap between Indiana and the other states is reduced.

Several factors need to be taken into account when computing the expected lifetime retirement benefits for a school administrator. First, the duration over which a person would receive annual benefits would have an obvious impact on lifetime benefits because the pension plan is a defined benefit plan. For the purpose of illustration, the gross lifetime pension benefits are estimated assuming that the school administrator would draw a pension for either 10 or 20 years after retiring at age 65. Second, the annual pensions may need to be adjusted for the cost-of-living increases provided by each state. Third, the savings accumulated in Indiana's additional state annuity program should be included in the administrator's expected lifetime retirement benefits because school corporations pay the three percent mandatory retirement contributions for administrators. The simulations assumed that three percent annual salary contributions were made for the school administrator and that the value of the annuity grew by six percent per year. It was further assumed that the annuity benefits continue to accumulate interest after retirement until the funds have been fully dispersed. Fourth, any state taxes that would have to be paid on the retirement benefits were subtracted from the gross lifetime pension benefits. Fifth, the state income tax rates were applied to all of the retirement benefits received

per year. Finally, the personal contributions made by school administrators to participate in each plan were subtracted from the gross lifetime benefits.

Table 14 provides estimates of the net benefits that the administrator would receive from each state assuming that the administrator received benefits up through age 75. All dollar figures are adjusted for inflation.

Table 14. Estimates of Net Pension Benefits Through Age 75 for a Hypothetical School Administrator in Six States

State	Gross Retirement Benefits w/o Annuity	Gross Retirement Benefits with Annuity (A)	State Income Taxes (B)	Net Employee Contributions (C)	Net Retirement Benefits (A-B-C)	Rank
Indiana	$636,401	$841,088	$29,293	$0	$811,795	3
Florida	$848,941	$848,941	$0	$0	$848,941	1
Illinois	$671,046	$671,046	$0	$56,866	$614,180	6
Kentucky	$849,765	$849,765	$0	$71,651	$778,113	4
Michigan	$827,250	$827,250	$0	$106,131	$721,119	5
Ohio	$907,818	$907,818	$5,901	$76,363	$825,554	2

Note: All dollar figures are adjusted for inflation.

The second and third columns show that Indiana's state annuity would add $204,687 to the gross pension benefits received by the school administrator. This total includes the value of the annuity up through age 65 plus additional interest that would continue to accrue on the remaining balance during retirement. When the annuity is added to the state pension benefits in Indiana and the Social Security pension, it can be seen that Indiana's relative position in total benefits

improves substantially. Indiana ranks fourth out of the six states in terms of the gross retirement benefits received through ten years (column 3). The totals across the six states range from a high of $907,818 in Ohio to a low of $671,046 in Illinois. State income taxes had to be subtracted from these gross totals for both Indiana and Ohio. Indiana compares less favorably to other states on this aspect; however, the state taxes are a relative small portion of the gross retirement benefits. The net employee contributions represent the mandatory contributions that the administrator would have to make to the state pension plan in each state minus the savings from not having to contribute to Social Security (7.65% of salary per year). Indiana compares favorably to other states on this dimension because school administrators do not make direct salary contributions into the retirement plan, and the three percent mandatory employee contribution for the annuity plan is covered by school corporations. After subtracting state taxes and net employee contributions from the gross pension, the data show that Indiana moves up to third among the six states in terms of the net financial benefit from retirement.

Table 15 provides similar calculations of the net lifetime financial benefits for an administrator in each state assuming that he/she received pension benefits up through age 85. The value of Indiana's annuity is higher in this simulation than in the previous example because the annuity would accumulate more interest due to the longer retirement period (20 years). Given this information, the net benefits through age 85 for an administrator who worked his or her entire career in Indiana would equal $1.46 million. Indiana would rank fifth out of six states in terms of the total net retirement benefits. Indiana's ranking relative to other states falls as the time in retirement increases because the annuity does not grow at the same rate as the total state pension benefits.

Table 15. Estimates of Net Pension Benefits Through Age 85 for a Hypothetical School Administrator in Six States

State	Gross Retirement Benefits w/o Annuity	Gross Retirement Benefits with Annuity (A)	State Income Taxes (B)	Net Employee Contributions (C)	Net Retirement Benefits (A-B-C)	Rank
Indiana	$1,234,130	$1,512,672	$51,904	$0	$1,460,767	5
Florida	$1,697,882	$1,697,882	$0	$0	$1,697,882	2
Illinois	$1,342,092	$1,342,092	$0	$56,866	$1,285,226	6
Kentucky	$1,581,979	$1,581,979	$0	$71,651	$1,510,328	4
Michigan	$1,654,500	$1,654,500	$0	$106,131	$1,548,369	3
Ohio	$1,815,636	$1,815,636	$11,802	$76,363	$1,727,472	1

Note: All dollar figures are adjusted for inflation.

Sensitivity Analysis of Pension Benefits in Indiana

This section examines the impacts that changes in the parameters of Indiana's state pension plan for school administrators would have on their total lifetime net benefits. In particular, three changes to Indiana's pension plan were considered here:

- ✓ Increased the formula multiplier from 1.1% to 1.5%
- ✓ Decreased the years for final average salary calculation from five to three
- ✓ Increased the cost-of-living adjustment from two percent to three percent

In the fourth sensitivity analysis, all three adjustments were made at the same time. The results from the sensitivity analyses are presented in Table 16:

Table 16. Effects of Changes in Indiana's Pension Plan for School Administrators

Change to Indiana's Pension	Annual State Pension + Social Security Pension	Net Benefits Through Age 75	Net Benefits Through Age 85
No changes made to state pension	$65,492	$811,795	$1,460,767
1. Increased formula multiplier to 1.5%	$81,014	$955,223	$1,734,040
2. Decreased years for final average salary calculation to three	$66,747	$823,391	$1,482,862
3. Increased annual cost-of-living adjustment for pension to 3%	$65,492	$829,689	$1,533,913
4. All three changes were made	$82,725	$996,155	$1,866,845

Table 16 shows that the net lifetime retirement benefits for school administrators were very sensitive to changes in the formula multiplier. Increasing the multiplier from 1.1% to 1.5% would lead to an increase of approximately $140,000 for an administrator who received retirement benefits for ten years. Alternatively, reducing the number of years used in the calculation of an administrator's final average salary would have relatively little impact on the post-retirement benefits that they receive. Increasing the cost-of-living adjustment from two percent to three percent annually would have a greater impact than reducing the number of years used in the final average salary calculation, but the impact would be smaller than is true with an increase of 0.4% in the formula multiplier. Finally, the last simulation shows that the largest impact on total net benefits occurred when several changes were made to the pension plan at the same time.

Simulation of Changes in Retirement Benefits from Moving Across States

School administrators are not restricted to spending their entire careers in one state. Once an administrator becomes vested in the pension plan in one state, the person is entitled to that benefit no matter where the person chooses to live or work. Thus, it is possible for an administrator to draw pension benefits from multiple states. As a result, one factor in an administrator's decision to move to another state might be more lucrative pension benefits.

Before analyzing the differences in pension benefits for administrators who move from Indiana to other states, it might be helpful to examine the general change in pension benefits that arise from moving. Figure 4 provides a comparison of the annual pension benefits received by a school administrator in two different scenarios. In the first scenario, represented by a solid line with circles, the school administrator stays in one state for his or her career. In the second scenario, the school administrator works for 20 years in the first state and then moves to the second state in year 21. The solid line with squares shows the annual pension benefits that the school administrator would receive for each year of service in the second state. The solid line with triangles shows the total annual pension that the school administrator would receive after combining the annual pensions from states A and B. The flat portion of the total pension line between years 21-25 represents the period in time when the school administrator has not yet earned vesting rights in state B, and thus there is no change in the person's total annual pension until vesting rights have been earned. The reason that the combined pension is lower than the pension from staying in one state is that the first 20 years of service credit are applied to a final average salary of $49,354, whereas years 21-45 of service credit are applied to a final average salary of $89,139. For the school administrator who stays in one state for his or her entire career, the final average salary of $89,139 is applied to all 45 years of service credit.

Figure 4. Comparison of Annual Pension Benefits from Moving and Staying in One State for a Hypothetical School Administrator

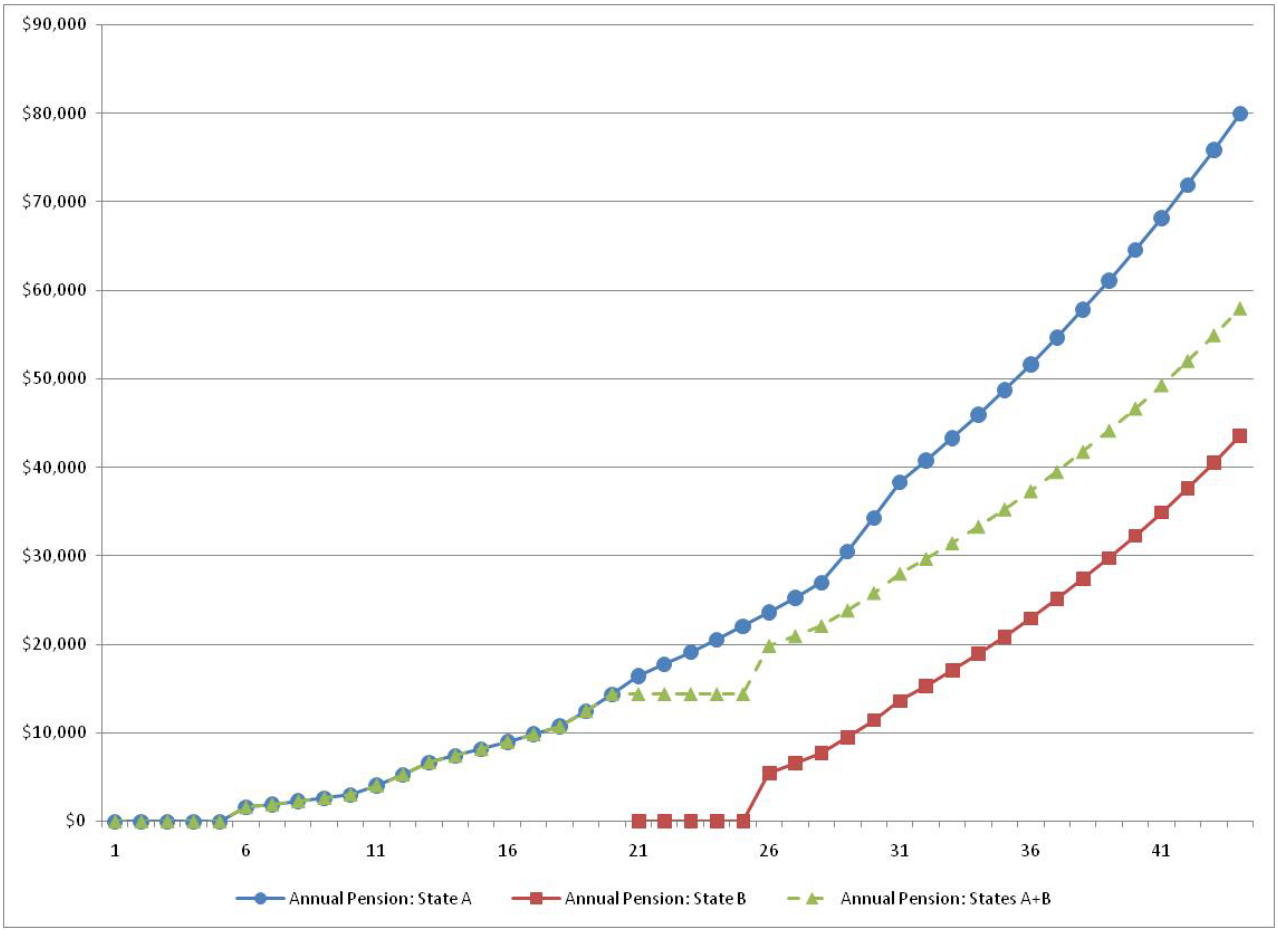


Figure 4 illustrates that holding all else constant, a school administrator would lose pension benefits if he or she were to move from state A to state B after 20 years. As noted earlier in this report, the loss occurs because when the administrator moves from state A to state B, a lower final average salary is applied to the years of service credit earned in state A.

The following simulations focus on the change in lifetime pension benefits for an Indiana school administrator who moves to one of the other five states considered in this study. Because there are countless possibilities that could be simulated, the focus is on one particular example as an illustration. This case uses the same school administrator shown in the previous simulations,

but it is now assumed that the administrator worked for the first 30 years in Indiana and then moved to Florida, Illinois, Kentucky, Michigan, or Ohio for the remaining 14 years of his or her career. Using these parameters, the administrator would be fully vested in both Indiana's pension plan as well as the new state's pension plan. Table 17 shows the annual total pension that the administrator would receive given this information:

Table 17. Estimated Annual Pension Benefits Received by a Hypothetical School Administrator from Each State

State	Final Average Salary	Formula Multiplier	Years of Service Credit	Annual State Pension Benefit
Indiana	$53,251	1.1%	30	$17,573
Florida	$88,189	1.6%	14	$19,754
Illinois	$89,473	2.2%	14	$27,558
Kentucky	$90,782	2.5%	14	$31,774
Michigan	$90,782	1.5%	14	$19,064

The first row shows the annual retirement benefit calculations for the administrator for the first 30 years of service in Indiana. Note that the final average salary ($53,251) is substantially lower than the final average salary shown earlier because the 14 highest earnings years are no longer included in the final average salary calculation for Indiana. When the final average salary is multiplied by the formula multiplier and the years of service credit, it shows that the school administrator's annual pension from Indiana would be $17,573. For the remaining five states, the annual pension benefits shown in Table 17 only include the benefits

that administrators would accrue for service in the new state over the last 14 years in their careers. In Florida, for example, the annual state pension benefit is found by multiplying the final average salary ($88,189) by the formula multiplier (1.6%) and the years of service credit in Florida, for a total of $19,754/year. Overall, the new state portions of total pension benefits would range from the high of $31,774 in Kentucky to a low of $19,064 in Michigan. Illinois fares better in this comparison because the school administrator's pension from Illinois is no longer affected by the limit of 75% of the final average salary.

However, the calculations shown in Table 17 for the five states outside of Indiana do not include the vested benefits that the administrator would still receive from the years of service credit in Indiana. Accordingly, the annual pension benefit from Indiana must be added to the benefits in each of the other states when calculating the total state pensions that the administrator would receive. In addition, the school administrator would retain either the Social Security pension earned from service in Indiana or the higher Social Security pensions from Florida and Michigan. The administrator would also keep the portion of the annuity earned for years of service credit in Indiana. Table 18 provides estimates of the lifetime pension benefits from all sources up through age 75. The bottom row contains the values of each component assuming that the administrator stays in Indiana for his or her entire 44-year career.

Table 18. Lifetime Retirement Benefits Until Age 75 for Hypothetical Indiana School Administrator Who Moves to Another State During Career

Moving Decision	Annual Pension Benefits	Annual Social Security Benefits	Annual State + Social Security Benefits	Annuity from Indiana	Total Lifetime Benefits Through Age 75	Net Employee Contributions	Net Lifetime Benefits Through Age 75	Change in Benefits from Moving
Did Not Move	$42,683	$22,809	$65,492	$204,687	$841,088	$29,293	$811,795	-----
Moved to Florida	$37,327	$22,809	$60,136	$146,827	$748,188	$0	$731,873	-$79,922
Moved to Illinois	$45,130	$14,263	$59,393	$146,827	$740,761	$22,902	$701,543	-$110,252
Moved to Kentucky	$49,346	$14,263	$63,609	$146,827	$782,921	$28,857	$737,749	-$74,046
Moved to Michigan	$36,637	$22,809	$59,446	$146,827	$741,287	$52,393	$672,578	-$139,217
Moved to Ohio	$45,534	$14,263	$59,797	$146,827	$744,793	$30,754	$695,906	-$115,889

Table 18 demonstrates that the total net retirement benefits for the administrator would fall when he/she moves from Indiana to another state after 30 years of service. The loss to the administrator over retirement from moving away from Indiana would range anywhere from a low of $74,000 if he or she moved to Kentucky to a high of nearly $140,000 if he or she moved to Michigan. The reduction in net pension benefits occurs because a lower final average salary is used in the annual pension benefit calculations for the first 30 years of service credit. When the school administrator stays in Indiana for his or her entire career, each year of service is multiplied by the final average salary for the last 5 years of service ($88,189). However, when the administrator moves from Indiana after 30 years, the years of credit are multiplied by a much lower final average salary ($53,251).

The reduction in lifetime retirement benefits that a school administrator would experience from moving to another state could be partially offset by the following:

- ✓ *Purchasing additional years of service credit*. Administrators who previously worked in another state are permitted to purchase years of service credit in the new

state. This would enable them to increase the years of service credit used in calculating the pension from their new state. However, the school administrator would have to pay for each year of service credit, usually at the same or higher rate than the administrator must pay to participate in the state's pension plan. In addition, there are limits to the number of years of service credit that could be purchased, and school administrators would have to forego the pension benefits for the same years of service in the previous state.

- ✓ *Receiving a higher salary*. If administrator salaries are higher in the new state than in Indiana, then this would not only provide more compensation during employment, but would increase the final average salary and hence the level of pension benefits from the new state. In this simulation, for example, the administrator would need to receive a final average salary of $112,000 in Kentucky (a 23% increase) in order to receive the same net lifetime benefits as he or she would have received from staying in Indiana.
- ✓ *Receiving supplemental annuity retirement benefits*. School corporations in other states may opt to give administrators an additional annuity to compensate for the difference in retirement benefits. These annuity benefits could help compensate school administrators for the loss in state pension benefits from moving.
- ✓ *Redistributing benefits and salary*. Finally, school corporations could provide administrators with higher salaries in exchange for reduced fringe benefits. The administrator would then be responsible for using their higher salary to purchase benefits on their own. In doing so, this would increase the administrator's final average salary that would then lead to a higher pension. Gammill (2007), for

example, showed how the salaries for some superintendents in Indiana are increased by the equivalent of certain fringe benefits (medical, dental, transportation allowance) in lieu of receiving the benefits.

Part IV: Survey Results of School Administrators in Indiana

The comparison of state pension plans for Indiana to other states has documented that over the short term, Indiana's pension plan for school administrators is comparable to but slightly worse than those in place in neighboring states. Indiana's pension plan becomes less advantageous to school administrators as the retirement length increases because the benefits from the annuity component grow at a slower rate than the additional annual pensions. Among the factors that have a negative effect on Indiana's pension plan are that the plan uses the lowest formula multiplier in the nation, and a substantial amount of time is required for the vesting of benefits. Nonetheless, Indiana's pension plan has several appealing features. One factor working in Indiana's favor is that school administrators do not have to make personal salary contributions in order to take part in the pension plan or the additional annuity. A second appealing feature is that Indiana does not impose a cap on the annual pension benefits that school administrators may receive. The results of the study also show that school administrators in Indiana stand to be disadvantaged in their total pension benefits when they switch states mid-career, unless they are compensated for the difference by receiving higher salaries or additional supplemental benefits.

Whereas the differences in the pension plans are straightforward to document, for several reasons it is more difficult to determine how each of these factors affect the career choices of school administrators. First, the details of the pension plans used in each state may not be known by school administrators when they are making decisions about where to work and whether to

move to another state. Uncovering the details behind each plan and how they are used to determine pension benefits usually requires a substantial time investment on the part of the school administrator. Second, school administrators may have a difficult time comparing the net benefits of pension plans across states because of the many different factors that can affect the values of their pensions. Some components, such as the formula multiplier, are relatively straightforward in terms of how it is used to determine pension benefits. Other factors, such as vesting rules, caps on the annual pension benefits, and treatment of Social Security benefits, may be more difficult for individuals to consider. Finally, the relative importance that school administrators attach to the factors that go into the calculation of their pensions may vary across individuals and may not reflect the true importance of each factor. For example, it is possible that school administrators would place greater importance on the gross pension benefits that they would receive as opposed to the personal contributions that they must make to the pension plan, even though both have an equal dollar-for-dollar influence on the net lifetime pension benefits they would receive. Taken together, it is possible that the labor market choices of school administrators in Indiana are influenced by inaccuracies about the state's pension plan and how it fares relative to other states.

To address this issue, two separate surveys were conducted in the spring of 2007 to gather information about the importance of salary, benefits, and other attributes on the employment and retirement decisions of K-12 educators in Indiana. The surveys were conducted for (1) current superintendents in Indiana and (2) current principals in Indiana. The use of two separate surveys was intended to capture information about career decisions for different groups of school administrators. It was anticipated that, on average, the superintendent respondents would be the group that is closest to retirement age, followed by the respondents to the principal

survey. It was hoped that the results from the two surveys would be somewhat complementary because all of these individuals would be subject to the same pension plan.

One important limitation of the research design is that the superintendents and principals surveyed included only those individuals who were currently employed in Indiana. As a result, the samples would include only those individuals who have already made the initial decision to seek employment in Indiana. This means that the samples would not be representative of the larger population of school administrators who would have to make decisions about where to locate. For example, if the perception exists that Indiana's pension plan is not as favorable as those used in other states, then the samples of school administrators in Indiana may include individuals who are less concerned about pension benefits relative to other attributes such as salary, geographic location, and proximity to family.

Survey Details and Descriptive Statistics

The survey instruments were developed in the spring of 2007 in conjunction with feedback from the Indiana Association of Public School Superintendents (IAPSS), Indiana Urban School Association (IUSA), and the Indiana Association of School Principals (IASP).[7] The surveys were conducted in web-based format, where individuals in each survey group were contacted by e-mail by the respective associations and asked to participate in the survey. A copy of the invitation sent to participants and the survey instruments used are shown in the Appendix to this report. The e-mail invitation included a hyperlink to a website where the surveys resided. The aforementioned organizations provided lists of e-mail addresses for their memberships and contacted members to encourage them to complete the surveys. The surveyed populations included 290 superintendents and approximately 600 principals. Reminder e-mail messages

[7] The survey instruments and protocol were reviewed and approved by the Human Subjects office at Indiana University.

were sent to everyone in the survey populations two weeks after the initial invitation to participate. Completed surveys were obtained for 64 superintendents and 94 principals.

All but five of the respondents to the superintendent survey were currently serving as superintendents, with the remaining individuals being either associate, assistant, or interim superintendents. Sixty-nine percent of the respondents to the principal survey were principals, 23% were assistant principals, and the remaining 8% respondents were directors or deans of specific functions within schools (such as Director of Special Education). Table 20 provides a breakdown of the respondents in each group according to selected categories:

Table 20: Descriptive Statistics for Respondents to School Administrator Surveys

Category	Superintendents	Principals
Male	82.8%	53.2%
Female	17.2%	46.8%
Born in Indiana	70.3%	78.7%
Not born in Indiana	29.7%	21.3%
Highest degree Ph.D.	20.3%	2.1%
Highest degree Ed.D.	26.6%	5.3%
Highest degree Ed.S.	43.8%	16.0%
Highest degree Masters	6.3%	72.3%
Highest degree from Indiana University	28.1%	28.7%
Highest degree from Ball State University	20.3%	20.2%
Highest degree from Indiana State University	25.0%	19.1%
Highest degree from Purdue University	9.4%	6.4%
Highest degree from Butler University	1.6%	6.4%
Highest degree from other institutions	15.6%	19.2%
Age 25-34	4.7%	10.6%
Age 35-44	4.7%	27.7%
Age 45-54	28.1%	29.8%
Age 55-64	56.3%	29.8%
Age 65 and older	6.3%	2.1%

The vast majority of superintendents who responded to the survey were male, whereas only slightly more than half of the principals were male. More than two out of three administrator respondents were born in Indiana, which is not surprising given that the samples were drawn

exclusively from school administrators who are currently working in Indiana. With regard to educational attainment, almost half of the superintendents in the sample hold a doctorate degree (Ph.D. or Ed.D.), and another 43% possess an Ed.S. degree. For principals, over 72% have a masters degree as their highest degree. Indiana University was the largest single grantor of highest degrees for both superintendents and principals (28% each), followed by Indiana State University, Ball State University, and Purdue University. Finally, the data show that over 62% of the responding superintendents were age 55 or older, and fewer than 10% were under age 44.

Administrator Perceptions of Indiana's Work Environment

The conceptual model of educator decision making posits that individuals will assess states on financial and non-financial criteria when making choices about where to reside. Table 20 provides a comparison of the assessment of respondents with regard to how Indiana compares to other states in terms of salaries, benefits, and other factors relating to work environment.

Table 20: Administrator Perceptions of Indiana's Work Environment

	Superintendents		Principals	
Perception of Attribute for Indiana	**% Indiana Better than Other States**	**Mean Score**	**% Indiana Better than Other States**	**Mean Score**
Cost-of-living	59.6%	2.65	51.2%	2.60
Employment opportunities	30.8%	2.37	15.5%	2.05
Salaries	9.6%	1.42	8.3%	1.71
Contributions to retirement	7.7%	1.65	14.3%	1.87
Retirement benefits	3.8%	1.02	7.1%	1.48
Years needed for vesting	1.9%	1.42	9.8%	1.70

Notes: Mean score is the average of the following values: 4 = "Indiana is substantially better than other states," 3 = "Indiana is slightly better than other states," 2 = "Indiana is comparable to other states," 1 = "Indiana is slightly worse than other states," 0 = "Indiana is substantially worse than other states."

The results show that both groups of administrators in Indiana felt that Indiana compared the most favorably to other states in terms of the cost-of-living, followed by the opportunities for

employment. Respondents also observed that administrator salaries in Indiana were not as good as in other states. The lowest ratings from administrators were given to the selected aspects of the state's retirement program. Only four percent of superintendents and seven percent of principals stated that the retirement benefits in Indiana were either substantially or slightly better than in other states. Administrators gave very low ratings to the years needed for vesting in the retirement plan. Interestingly, only 7% of superintendents and 14% of principals felt that the personal contributions required of administrators were substantially or slightly better than in other states, even though it has been documented in this report that Indiana is one of the few states that do not require administrators to contribute to its retirement plan.

Administrator Perceptions of Factors Affecting Choice of State

The next set of questions asked school administrators for their assessment of the relative importance of a series of factors in their choice of state in which to work. Table 21 contains descriptive statistics for these questions for superintendents and principals.

Table 21: Importance of Factors to Administrators When Choosing a State

Importance of Attribute When Choosing a State	Superintendents		Principals	
	Important or Very Important	Mean Score	Important or Very Important	Mean Score
Good geographic location	91.4%	2.29	81.8%	2.03
Good retirement benefits	86.2%	2.36	78.4%	2.01
Close proximity to family	77.6%	2.21	95.5%	2.60
Good employment opportunities	76.8%	1.98	65.9%	1.75
High salaries	75.9%	1.97	69.3%	1.75
Low cost-of-living	65.5%	1.71	70.1%	1.79
Low retirement contributions	57.9%	1.58	53.0%	1.52

Notes: Mean score is the average of the following values: 3 = "Factor is very important," 2 = "Factor is important," 1 = "Factor is somewhat important," 0 = "Factor is not important."

The administrators who responded to the survey noted that geographic location, retirement benefits, and proximity to family were very important to them in choosing a state in which to work. The stated importance for Indiana's school administrators in both groups of retirement benefits when choosing a state is difficult to reconcile with the result in Table 20 where administrators felt that Indiana did not compare favorably with other states in terms of retirement benefits. It is interesting to note that the level of contributions that administrators had to make to their retirement plan was not viewed as being as important as other attributes in the table when choosing a state in which to work.

Administrator Perceptions of Factors Affecting Choice of School Corporation

In addition to selecting a state, school administrators must choose the school corporation in which to work within their chosen state. This decision can be influenced by financial factors such as the salary and non-salary benefits that they would receive, as well as non-financial attributes of the school corporation. The retirement benefits that administrators receive within a state can vary across school corporations even though all administrators are covered by the same state pension program (Gammill, 2007). To ascertain the importance of financial and non-financial factors in the school corporation choices of administrators, a series of questions were posed to administrators. The results are shown in Table 22.

Table 22: Importance of Factors to Administrators When Choosing a School Corporation

Importance of Attribute When Choosing a School Corporation	Superintendents		Principals	
	Important or Very Important	Mean Score	Important or Very Important	Mean Score
Relations with school board	100.0%	2.90	93.3%	2.44
Salary	83.1%	2.12	75.8%	1.98
Setting (urban, rural, etc.)	81.7%	2.10	75.3%	1.97
Proximity to family	78.3%	2.08	91.1%	2.46
Size/enrollments	73.3%	1.95	67.0%	1.78
Non-salary benefits	71.7%	2.05	74.7%	1.92
Academic quality of students	63.3%	1.72	65.9%	1.80
Socioeconomic status of community	46.7%	1.42	45.1%	1.47

Notes: Mean score is the average of the following values: 3 = "Factor is very important," 2 = "Factor is important," 1 = "Factor is somewhat important," 0 = "Factor is not important."

The results show that school administrators, particularly superintendents, stated that they placed great importance on the relationship with the school board when deciding where to work within Indiana. This factor was followed in importance by proximity to family, salary, and non-salary benefits. Generally, non-financial factors such as the size of the school corporation, the socioeconomic status of the community, and the academic quality of students, had less stated importance to school administrators than financial factors when deciding where to work within the state.

Future Employment Plans of Indiana School Administrators

As noted earlier in this report, concern has been expressed that school administrators in Indiana are frequently leaving the state partway through their careers, in part due to the inadequacy of Indiana's pension plan. To address this issue, the surveys asked respondents for information about their future employment plans. It was found that the vast majority of superintendents (78.1%) and principals (85.1%) indicated that they planned on completing their education careers in Indiana. Questions were then posed to superintendents and principals about

how selected factors would influence their decision to move to a different state to end their careers. The results are summarized in Table 23.

Table 23: Importance of Factors to School Administrators in Whether to Move to a Different State

Importance of Attribute When Deciding Whether to Move	Superintendents		Principals	
	Important or Very Important	Mean Score	Important or Very Important	Mean Score
Geographic location	94.8%	2.45	86.9%	2.39
Years for vesting	91.4%	2.50	78.6%	2.08
Retirement benefits	89.7%	2.41	77.4%	2.10
Employment opportunities	86.0%	2.16	69.0%	1.86
Salary	81.0%	2.19	70.2%	1.86
Cost-of-living	81.0%	2.02	67.9%	1.88
Proximity to family	80.7%	2.32	83.5%	2.40
Contributions to retirement plan	73.7%	2.00	67.9%	1.82

Notes: Mean score is the average of the following values: 3 = "Factor is very important," 2 = "Factor is important," 1 = "Factor is somewhat important," 0 = "Factor is not important."

From Table 23, it can be seen that all of these factors play a role in the stated intentions of Indiana's school administrators to consider moving to another state to end their career. Retirement benefits were listed as being important or very important in this decision for the vast majority of respondents to the survey, and superintendents in particular noted the importance of the years required for vesting in their decision-making process. Given that school administrators would expect to lose pension benefits by moving, this would suggest that many administrators would be reluctant to move from Indiana unless they would be compensated for the loss by receiving a substantially higher salary, supplemental retirement annuities, or creative salary restructuring to increase their pension benefits. Because school administrators may be misinformed about how Indiana's pension plan compares to the plans in other states, some may incorrectly determine that they would benefit financially by moving to another state.

In an effort to determine how each of these factors affect the decisions of administrators to consider moving to another state, the data for superintendents and principals were combined and a logistic regression model was estimated of the following form:

$$(10) \qquad M_i = \alpha_0 + \alpha_1 AGE_i + \alpha_2 GENDER_i + \alpha_3 IN_i + \alpha_4 SUPT_i + \sum_{p=5}^{12} \alpha_p A_{pi} + \varepsilon_i$$

where M_i = 1 if the i-th respondent indicated that he/she plans on ending his/her career in Indiana, 0 otherwise; *AGE* = age of respondent; *GENDER* = 1 if male, 0 otherwise; *IN* = 1 if born in Indiana, 0 otherwise; *SUPT* = 1 if currently a superintendent, 0 otherwise; A_1 to A_8 = eight factors shown in Table 24; and ε = random error term. The coefficients α_0 to α_{12} represent the effect of each variable on the likelihood of a principal indicating that he/she plans on finishing his/her career in Indiana. Table 24 contains the results from equation (10) for the superintendent and principal sample. The first column of figures shows the estimated coefficients. The standard errors are contained in the second column, followed by the t-ratios, which are used to assess the statistical importance of each factor after holding the other factors constant. The equation shown in Table 24 correctly predicted the decisions of administrators 88% of the time.

Table 24. Logistic Regression Analysis of Effects of Factors on Decision to Finish Career in Indiana

Dependent Variable = 1 if intend to complete career in Indiana, 0 otherwise

Independent Variable	Coefficient	Standard Error	T-Ratio
Age	-0.043	0.035	-1.23
Gender	0.160	0.668	0.24
Indiana Native (*IN*)	-0.158	0.704	-0.22
Superintendent (*SUPT*)	0.379	0.659	0.58
Salary (A_1)	1.183	0.557	2.12**
Employment Opportunities (A_2)	-2.949	0.854	-3.45***
Cost of Living (A_3)	1.451	0.572	2.54**
Retirement Benefits (A_4)	-0.594	0.622	0.95
Contributions to Pension (A_5)	0.244	0.437	0.56
Years for Vesting (A_6)	-0.123	0.595	0.21
Geographic Location (A_7)	-0.138	0.629	0.22
Proximity to Family (A_8)	0.058	0.446	0.13

Notes: ***significant at the 1% level, **significant at the 5% level, *significant at the 10% level.

The analysis reveals that those school administrators who attached greater importance to salary and the cost-of-living were more likely than other administrators to indicate that they planned on completing their careers in Indiana. These results would seem to indicate that administrators viewed the salary levels and cost-of-living in Indiana to be favorable relative to other states. Likewise, administrators who stated that employment opportunities were important to them when deciding on their future career path were less likely to opt to move to another state to end their career. All of the other factors, including the stated importance of retirement benefits, did not have a statistically significant effect on the future career plans of school administrators in these two samples. It should be noted, however, that the correlations among the eight factors shown in Table 24 were positive and relatively large, which could have led to increases in the standard errors for the coefficients in question.

Decisions of Principals to Pursue the Superintendency

The supply of future superintendents for Indiana will be largely drawn from the set of current principals in the state. Accordingly, a series of questions were posed to principals to determine how selected factors would influence their decisions as to whether or not to pursue the superintendency in the future. The survey results showed that close to half (47.9%) of the principals indicated that they would consider becoming a superintendent at some point in their career. Table 25 provides a summary of how selected factors influence their decision.

Table 25: Stated Importance of Factors for Principals in Deciding Whether to Become a Superintendent

Stated Importance of Factors in Decision to Become a Superintendent	Principals	
	Important or Very Important	Mean Score
Financial cost of education	43.8%	1.35
Time needed to obtain certification	42.2%	1.39
Salary	40.4%	1.44
Retirement benefits	34.1%	1.31
Employment opportunities	30.7%	1.32
Stress of the position	24.5%	0.72
Responsibilities of the position	18.9%	0.80

Notes: Mean score is the average of the following values: 3 = "Factor is very important," 2 = "Factor is important," 1 = "Factor is somewhat important," 0 = "Factor is not important."

The principals who responded to the survey noted that the barriers (time and cost) to acquiring the credentials needed to become a superintendent were very important to them in their intentions to consider becoming a superintendent. The financial aspects of the superintendent position, in terms of salary and benefits, were next in stated importance to principals. Finally, the stress and responsibilities of the superintendency were cited as the least important factors in the principals' decisions of whether or not to become superintendents in the future.

To further explore how these factors affect the stated intentions of principals to become a superintendent, the following statistical model was estimated:

$$(11) \qquad S_i = \alpha_0 + \alpha_1 AGE_i + \alpha_2 GENDER_i + \sum_{p=3}^{9} \alpha_p F_{pi} + \varepsilon_i$$

where S_i = 1 if the i-th respondent indicated that he/she would consider becoming a superintendent, 0 otherwise; *AGE* = age of respondent; *GENDER* = 1 if male, 0 otherwise; F_1 to F_7 = seven factors shown in Table 26; and ε = random error term. The coefficients α_0 to α_7 represent the effect of each variable on the likelihood of a principal indicating that he/she would consider becoming a superintendent. If the coefficient is positive, it suggests that holding the other factors constant, an increase in the variable in question would increase the chances of a principal stating that he/she would consider pursuing the superintendency in the future. The coefficients in equation (11) were estimated using logistic regression analysis. The key findings from this model are shown in Table 26.

Table 26: Logistic Regression Analysis of Effects of Selected Factors on Intention of Principals to Become a Superintendent

Dependent Variable = 1 if would consider becoming a superintendent, 0 otherwise

Independent Variable	**Coefficient**	**Standard Error**	**T-Ratio**
Age	-0.061	0.036	-1.70*
Gender	-0.933	0.786	-1.19
Salary (F_1)	-2.079	0.660	-3.15***
Employment Options (F_2)	-0.269	0.681	-0.40
Retirement Benefits (F_3)	-1.413	0.725	-1.95*
Stress of Position (F_4)	1.315	0.537	2.45**
Time Needed for Certification (F_5)	0.994	0.828	1.20
Cost of Education (F_6)	-0.699	0.781	-0.90
Responsibilities of Position (F_7)	-0.902	0.532	-1.70*

Notes: ***significant at the 1% level, **significant at the 5% level, *significant at the 10% level.

As before, the fit of the logistic regression model was good, with the model correctly predicting 87.5% of the cases. The results show that as principals attach more importance to retirement benefits, they become less likely to consider becoming superintendents in the future. Similarly, principals were less likely to intend to pursue the superintendency as they gave more importance to their salary. These results are puzzling to some extent because in general the salary and retirement benefits for superintendents are higher than what they are for principals; however, it could reflect Carr's (2003) observation that superintendents are more likely than principals to move across states and thus lose pension benefits. A principal's age was found to have a marginally negative effect on the intention to become a superintendent, showing that older principals were less likely to consider becoming a superintendent. Finally, as principals attach more importance to the stress of being a superintendent, they are more likely to indicate that they would consider becoming a superintendent.

Summary

The manner in which school administrators are compensated for their work is potentially very important for states to understand when designing and refining their pension plans. This study has shown that there are many different ways in which states structure their pension plans for school administrators. The literature review revealed that despite the importance of the topic, there have been very few theoretical or empirical studies in the literature that have examined the impacts that pension plans have on the labor market decisions of school administrators.

Some of the key findings from the six-state comparisons of school administrator pension plans include:

- ✓ The formula multiplier and the cap on pension benefits can have large effects on the annual pension benefits received by school administrators.

- ✓ School administrators will usually lose pension benefits when they move from one state to another unless they receive additional compensation in the form of higher salaries, additional retirement benefits from annuities, or fringe benefits.
- ✓ Indiana's pension plan for school administrators does not compare favorably to other states in terms of the formula multiplier used to calculate annual pension benefits.
- ✓ Indiana is at a disadvantage relative to other states in its ability to attract school administrators from other states due to the large number of years required for vesting of retirement benefits and the low formula multiplier.
- ✓ Three advantages of Indiana's pension plan relative to other states are: (1) administrators do not have mandatory contributions to participate in the pension plan, (2) there is no cap on the annual pension benefits, and (3) Indiana offers an additional annuity to which the administrator contributions are made by school corporations.
- ✓ Overall, Indiana's pension plan is slightly below average in comparison to the other five states considered here. In addition, as the retirement length increases, Indiana's pension plan becomes less favorable because the administrator's annuity benefits would accumulate at a slower rate than the annual pension benefits.

The surveys of superintendents and principals revealed the following key findings:

- ✓ School administrators reported that Indiana compared most favorably with other states in terms of cost-of-living and opportunities for employment.
- ✓ School administrators felt that Indiana compared less favorably in terms of retirement benefits and years required for vesting. Administrators also felt that the personal contributions to Indiana's pension plan were higher than in other states, even though this was shown to be false.

- ✓ Non-financial factors such as the geographic location of a state and the proximity to family were more important than financial aspects of administrative positions (salaries and benefits) when choosing a state in which to work. Nonetheless, financial considerations were still important to school administrators in their decision-making process.
- ✓ Non-salary benefits were important to school administrators when choosing a school corporation in which to work. Other factors such as relations with the school board and salary, however, were even more important. At the other extreme, the quality of students and socioeconomic status of the community were less important to administrators when selecting a school corporation.
- ✓ The vast majority (78%) of superintendents and principals (85%) stated that they intend to finish their careers in education in Indiana. The geographic location, retirement benefits, and the years needed for vesting in pension plans were all important factors in their decision to consider moving to another state. The statistical model, however, revealed that salary, employment opportunities, and the cost-of-living were the most important factors in determining whether administrators indicated that they planned on staying in Indiana for the remainder of their career.
- ✓ The cost and time barriers to becoming a superintendent were listed as important factors for Indiana principals in deciding whether or not to consider becoming a superintendent in the future. The statistical model revealed that after taking other factors into account, those who stated that financial factors were important in their decision were less likely than others to consider becoming a superintendent. This

finding is confusing given that salaries and benefits for superintendents are almost always higher than they are for principals.

To help improve the competitiveness of Indiana's pension plan for school administrators, a number of recommendations can be made based on the findings presented in this study:

1. *Make changes to Indiana's pension plan that would improve the lifetime retirement benefits for school administrators*. Through such improvements, the state would be better positioned to attract school administrators at the beginning of their careers, as well as to entice administrators to move to Indiana during their careers. Improvements that might be considered by the state include the following:
    - *Increase the formula multiplier to 1.5%*. This could result in an increase of 15% to 25% in the net lifetime retirement benefits for school administrators and allow Indiana's pension plan to be viewed as more comparable to other states that allow administrators to retain their Social Security benefits.
    - *Enact a three percent automatic cost-of-living increase for annual pension benefits*. This would alleviate concerns about Indiana's benefits losing ground over time due to inflation, and would not dramatically increase the cost of the pension plan to the state.
2. *Revise Indiana's pension plan in ways that will make it more attractive for school administrators from other states to relocate to Indiana*. Because school administrators stand to lose pension benefits when they move, it is imperative that the state find ways of reducing the financial harm that they would experience. These changes might include the following:

- *Decrease the years required for vesting in the state pension plan*. Currently, Indiana's 10-year vesting requirement serves as a disincentive for administrators over the age of 55 to move to Indiana. By lowering the vesting requirement to five years or less, Indiana would be better positioned to compete with other states for attracting experienced school administrators.
- *Increase the number of years of service credit that school administrators from other states can purchase when they move to Indiana.* By relaxing these rules, the state can enable school administrators from other states to increase their pension benefits and make up part of the deficiency that occurs when they move between states.

3. *Explore whether a small personal contribution level should be added to help fund the state's pension plan*. It appears that school administrators are more concerned with the level of benefits received than they are with the level of contributions necessary to participate in the plan, so "high benefit, high contribution" plans may be viewed by school administrators as being better than "low benefit, low contribution" plans even when the net benefits are the same. School administrators may also be able to negotiate with school corporations to pay their personal contributions to the pension plan in the same way that corporations pay the contributions to the annuity plan.
4. *Better inform school administrators about how retirement benefits are calculated, and highlight the positive aspects of Indiana's pension plan*. It may not be well known among school administrators, for example, that states such as Kentucky and Ohio with notably higher formula multipliers than Indiana do not allow pension plan participants to retain their Social Security benefits. Administrators may not be aware

of the fact that in many states, they would have to make contributions of about 10% of their salary each year in order to take part in the state pension plan, whereas Indiana requires no personal contributions from school administrators. In addition, school administrators may not know that some states such as Illinois impose caps on their annual pension benefits that can greatly reduce the lifetime financial benefits that administrators would receive. Highlighting the positive aspects of Indiana's pension plan and illustrating how it is difficult to improve one's retirement benefits by moving to other states may help Indiana retain more experienced school administrators.

5. *Conduct a follow-up study of Indiana school administrator knowledge of pension plans*. This report has shown that the pension plans for school administrators are very complex. Accordingly, it is likely school administrators do not fully understand the range of pension elements that affect retirement calculations, and thus cannot make accurate comparisons of the plans offered in different states. A follow-up study should be conducted with surveys and focus groups to discover the extent to which school administrators in Indiana understand the different components of the state's pension plan. This information would be useful to the state in making decisions as to how to modify the pension plan in the future and better inform school administrators about the state's plan.

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Appendix: Invitation and Survey Instruments

Invitation to Participate

We would like to invite you to participate in a research study (#07-11871). The study has been commissioned by the Indiana Department of Education to determine how educators make decisions about their career choices with regard to location. The Indiana Association of Public School Superintendents (IAPSS), Indiana Urban School Association (IUSA), Indiana Association of School Principals (IASP), and Indiana University School of Education are assisting us with the distribution of this survey.

The study will involve a survey of superintendents, principals, and recent graduates of Indiana University's teacher training program. The survey should take approximately five minutes to complete. We are surveying approximately 200 superintendents, 600 principals, and 500 recent graduates from Indiana University's teacher training program.

Through this research, we hope to better understand how monetary and other factors influence the vocational choices of educators, and design policies to make Indiana a more attractive state for educators to work.

The survey should take approximately five minutes to complete. Your participation in this study is voluntary, and you may refuse to participate without penalty. If you decide to participate, you may withdraw from the study at anytime without penalty. If you withdraw from the study before data collection is completed your data will be destroyed.

To access the survey, please click on the following link:

http://www.firmeproductions.com/index.php?pageId=51&preview=on

All information contained in your survey will be kept confidential. We will not maintain any records of the names or personally identifiable information on respondents. All findings and results will be presented in aggregate form so that individuals cannot be identified through their responses.

If you have questions at any time about the study or the procedures, you may contact the researcher, Robert Toutkoushian, at Education 4220, Indiana University, Phone: 812-856-8395, and e-mail: rtoutkou@indiana.edu.

If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have not been honored during the course of this project, you may contact the office for the Indiana University Bloomington Human Subjects Committee, Carmichael Center L03, 530 E. Kirkwood Ave., Bloomington, IN 47408, 812/855-3067, or by e-mail at iub_hsc@indiana.edu.

Thank you for your consideration and your assistance with this study.

Superintendent Survey

We thank you for agreeing to participate in this research study. Your participation is voluntary and you may refuse to participate without penalty. If you decide to participate, you may withdraw from the study at any time. If you withdraw from the study before data collection is completed your data will be destroyed. The survey should take approximately five minutes to complete. Through this research, we hope to better understand how monetary and other factors influence the vocational choices of educators, and help design policies that would make Indiana an attractive place for educators to work. All information contained in your survey responses will be kept confidential. We will not maintain any records of the names or personally identifiable information on respondents. All findings and results will be presented in aggregate form so that individuals cannot be identified through their responses. If you have questions at any time about the study or the procedures, you may contact Robert Toutkoushian at Education 4220, Indiana University (phone: 812- 856-8395, e-mail: rtoutkou@indiana.edu). If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have not been honored during the course of this project, you may contact the office for the Indiana University Bloomington Human Subjects Committee, Carmichael Center L03, 530 E. Kirkwood Ave., Bloomington, IN 47408, 812/855-3067, or by e-mail at iub_hsc@indiana.edu.

BACKGROUND QUESTIONS

1. My age is:

   25 to 34

2. My gender is:

   female

3. My highest degree earned is:

   masters

   If other:

4. My current position is:

   Superintendent

   If other:

5. At which institution did you receive your highest degree?

6. In what year did you receive your superintendent's license in Indiana?

1950

7. In which state were you born?

--Select a State--

Work History

8. How many years have you worked in Indiana as a superintendent or associate/assistant superintendent?

0

9. How many years have you worked in Indiana in other capacities in education (such as a teacher or principal) prior to your current position?

0

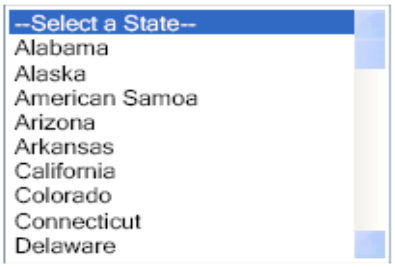
10. Did you work in another state as a superintendent or assistant/associate superintendent prior to serving as a superintendent in Indiana?

No

—» If yes, how many years did you work as a superintendent or assistant/associate superintendent in another state?

1

—» If yes, in which states did you work?



***Press and Hold "Control" button for multiple selections

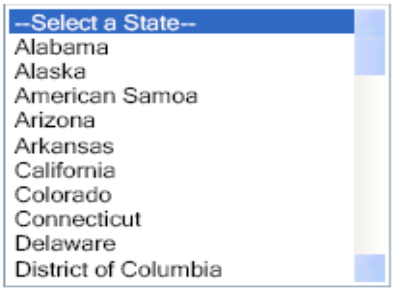
11. Did you work in another state in a different capacity in public education (teacher, principal, etc.) prior to your current position?

No

—» If yes, how many years did you work in a different capacity in another state?

0

—» If yes, in which states did you work?



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—» **Based on what you know today, how do you feel Indiana compares to other states on the following?**

Category	Indiana is substantially better than other states	Indiana is slightly better than other states	Indiana is comparable to other states	Indiana is slightly worse than other states	Indiana is substantially worse than other states
Salaries for superintendents	○	○	○	○	○
Opportunities to find employment as a superintendent	○	○	○	○	○
Cost of living	○	○	○	○	○
Retirement benefits for superintendents	○	○	○	○	○
Personal contributions to retirement plans for superintendents	○	○	○	○	○
Years required for vesting of retirement benefits for superintendents	○	○	○	○	○

12. Rate each of the following as to the importance to you when selecting a state in which to work as a superintendent or assistant/associate superintendent:

Category	Very Important	Important	Somewhat Important	Not Important
High salary	○	○	○	○
Many opportunities for employment	○	○	○	○
Good retirement benefits	○	○	○	○
Low retirement contributions	○	○	○	○
Low cost of living	○	○	○	○
Good geographic location	○	○	○	○
Close proximity to family	○	○	○	○

13. Rate each of the following as to the importance to you when selecting an Indiana school corporation in which to work as a superintendent or assistant/associate superintendent:

Category	Very Important	Important	Somewhat Important	Not Important
Salary	○	○	○	○
Non-salary benefits (perks)	○	○	○	○
Setting (urban, rural)	○	○	○	○
Size of the corporation	○	○	○	○
Relations with school board	○	○	○	○
Academic quality of students	○	○	○	○
Socioeconomic status of community	○	○	○	○
Proximity to family	○	○	○	○

Future Career Plans

14. At what age do you plan to retire?

30

15. Do you plan on completing your career in public education in Indiana?

No

16. Rate each of the following on the importance to you when deciding whether tc move to another state to complete your career:

Category	Very Important	Important	Somewhat Important	Not Important
Salary				
Employment options				
Cost of living				
Retirement benefits				
Amount I must contribute to my retirement plan				
Years required for vesting in the retirement system				
Geographic location				
Proximity to family				

17. Please add any additional comments concerning how you made your career locational decisions:

SUBMIT

Principal Survey

We thank you for agreeing to participate in this research study. Your participation is voluntary and you may refuse to participate without penalty. If you decide to participate, you may withdraw from the study at any time. If you withdraw from the study before data collection is completed your data will be destroyed. The survey should take approximately five minutes to complete. Through this research, we hope to better understand how monetary and other factors influence the vocational choices of educators, and help design policies that would make Indiana an attractive place for educators to work. All information contained in your survey responses will be kept confidential. We will not maintain any records of the names or personally identifiable information on respondents. All findings and results will be presented in aggregate form so that individuals cannot be identified through their responses. If you have questions at any time about the study or the procedures, you may contact Robert Toutkoushian at Education 4220, Indiana University (phone: 812- 856-8395, e-mail: rtoutkou@indiana.edu). If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have not been honored during the course of this project, you may contact the office for the Indiana University Bloomington Human Subjects Committee, Carmichael Center L03, 530 E. Kirkwood Ave., Bloomington, IN 47408, 812/855-3067, or by e-mail at iub hsc@indiana.edu.

Background Questions

1. My age is:

   25 to 34

2. My gender is:

   female

3. My highest degree earned is:

   masters

   If other:

4. My current position is:

   Principal

   If other:

5. At which institution did you receive your highest degree?

6. In what year did you receive your principal's license in Indiana?

1950

7. In which state were you born?

--Select a State--

Work History

8. How many years have you worked in Indiana as a principal or associate/assistant principal?

0

9. How many years have you worked in Indiana in other capacities in public education (such as a teacher) prior to your current position?

0

10. Did you work in another state as a principal prior to serving as a principal in Indiana?

No

—» **If yes, how many years did you work as a principal in another state?**

1

—» **If yes, in which states did you work?**

--Select a State--
Alabama
Alaska
American Samoa
Arizona
Arkansas
California
Colorado
Connecticut
Delaware
District of Columbia

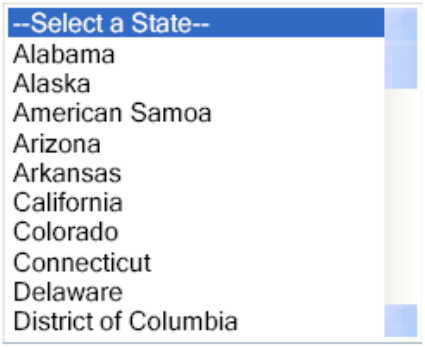
***Press and Hold "Control" button for multiple selections**

11. Did you work in another state in a different capacity in public education(teacher, etc.) prior to serving in your current position in Indiana?

No

—» **If yes, how many years did you work in a different capacity in another state?**

—» **If yes, in which states did you work?**



***Press and Hold "Control" button for multiple selections**

—» **Based on what you know today, how do you feel Indiana compares to other states on the following?**

Category	Indiana is substantially better than other states	Indiana is slightly better than other states	Indiana is comparable to other states	Indiana is slightly worse than other states	Indiana is substantially worse than other states
Salaries for principals	○	○	○	○	○
Opportunities to find employment as a principal	○	○	○	○	○
Cost of living	○	○	○	○	○
Retirement benefits for principals	○	○	○	○	○
Personal contributions to retirement plans for principals	○	○	○	○	○
Years required for vesting of retirement benefits for principals	○	○	○	○	○

12. Rate each of the following as to the importance to you when selecting a state in which to work as a principal:

Category	Very Important	Important	Somewhat Important	Not Important
High salary	○	○	○	○
Many opportunities for employment	○	○	○	○
Good retirement benefits	○	○	○	○
Low retirement contributions	○	○	○	○
Low cost of living	○	○	○	○
Good geographic location	○	○	○	○
Close proximity to family	○	○	○	○

13. Rate each of the following as to the importance to you when selecting an Indiana school corporation in which to work as a principal:

Category	Very Important	Important	Somewhat Important	Not Important
Salary	○	○	○	○
Non-salary benefits (perks)	○	○	○	○
Setting (urban, rural)	○	○	○	○
Size of the corporation	○	○	○	○
Relations with school board	○	○	○	○
Academic quality of students	○	○	○	○
Socioeconomic status of community	○	○	○	○
Proximity to family	○	○	○	○

Future Career Plans

14. At what age do you plan to retire?

30

15. If you are not currently a superintendent in Indiana, would you ever consider becoming one?

No

16. How important are the following reasons in your decision whether or not to consider becoming a superintendent in the future?

Category	Very Important	Important	Somewhat Important	Not Important
Salary	○	○	○	○
Employment options	○	○	○	○
Retirement benefits	○	○	○	○
Stress of the position	○	○	○	○
Time needed to obtain certification	○	○	○	○
Financial cost of education	○	○	○	○
Responsibilities of the position	○	○	○	○

17. Do you plan on completing your career in public education in Indiana?

No ☐

18. Rate each of the following on the importance to you when deciding whether to move to another state to complete your career:

Category	Very Important	Important	Somewhat Important	Not Important
Salary	○	○	○	○
Employment options	○	○	○	○
Cost of living	○	○	○	○
Retirement benefits	○	○	○	○
Amount I must contribute to my retirement plan	○	○	○	○
Years required for vesting in the retirement system	○	○	○	○
Geographic location	○	○	○	○
Proximity to family	○	○	○	○

19. Please add any additional comments concerning how you made your career locational decisions:

submit